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American Cinematographer

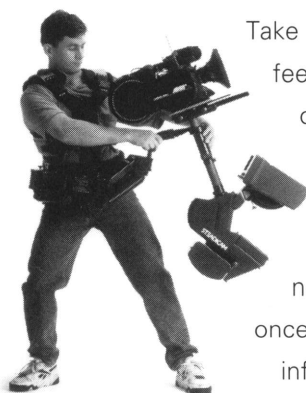
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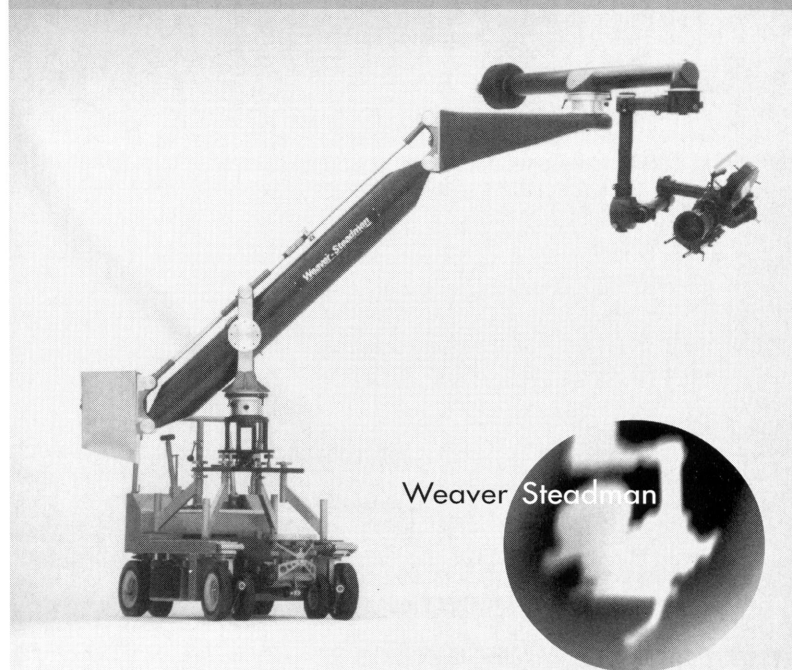
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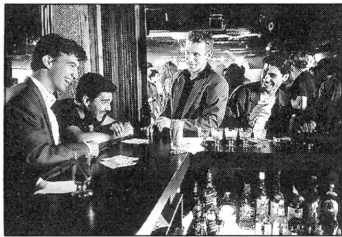
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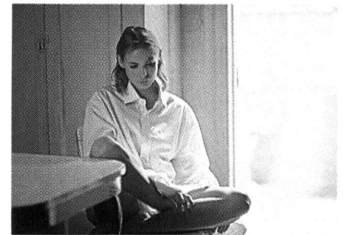
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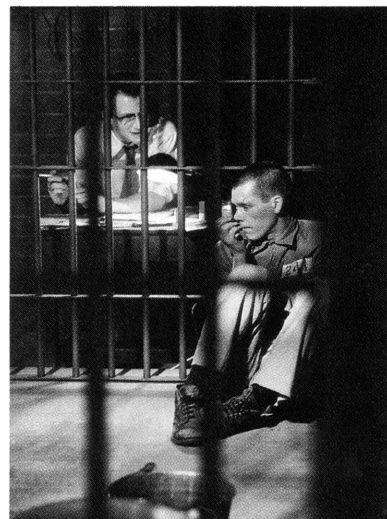
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78 Asking the Right Questions: An Interview With Nicholas Negroponte

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On Our Cover: A battered convict (Kevin Bacon) explains his plight to a sympathetic lawyer (Christian Slater) in the shadowy recesses of his cell, moodily lit by cinematographer Fred Murphy (photo by Anthony Friedkin).

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Bob Fisher
Mary Hardesty
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American Cinematographer

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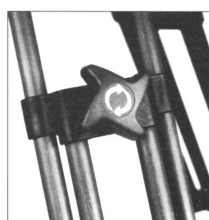
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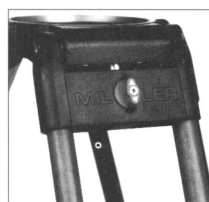
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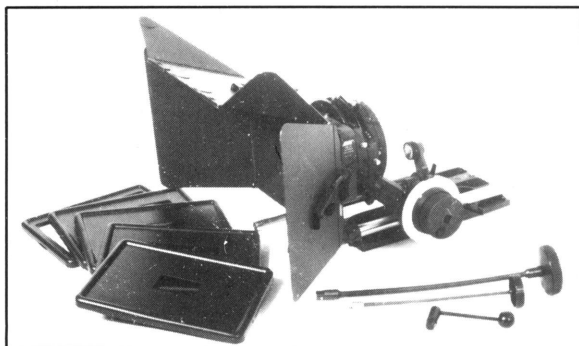
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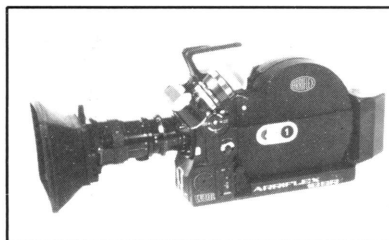
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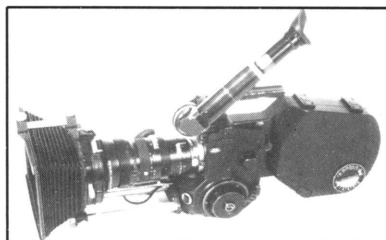


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300 frames, PL mount: New high-speed, effects and production camera at Clairmont: the Wilcam W12

The W12 is a completely new HS camera, designed to do what *you* need done. It's not a modification of military instrumentation cameras based on 30-year-old technology.

The way instrumentation cameras are used, there's never an optical printer involved. But for *your* purposes, there often is. For perfect print steadiness, your camera's movement should be closely compatible with the printer's movement.

Same registration as optical printer

For example: instrumentation cameras can be built with as many registration-pins as the designer wants. (Some have eight.) But *your* camera should have the same number as the optical printer (two); and those pins should act on the same perfs (relative to the frame) as the printer's pins. The W12 has the same number of pins and they act on the same perfs. And, like the printer's, the W12's pins are full size.

Vacuum gate, film clip holder

In the gate, the W12 pressure-plate uses a vacuum back, for best possible film flatness. There's a registered clip holder at the groundglass. The shutter is fixed: 120 degrees. The mirror spins at up to 9,000 rpm, so it's made of Beryllium—stronger and lighter (and more expensive) than glass.

Gentle takeup

With this camera, you don't have to take up film slack by hand. When you throw the Power On switch, after threading film, the W12's torque motors slowly take up the slack. The camera then goes into Standby mode and waits. When you throw the Run/Stop switch, the camera accelerates steadily to the set speed. 0 to 300 fps takes between 2 and 2½ seconds. 0 to 150 takes half that.

Even wrap

Once at the selected speed, sensor arms maintain even tension in the feed and takeup rolls as they change size. Regardless of speed, the wrap at the core is the same as the wrap at the outer edge. *No cinching*. Only a torque motor can provide this smooth a takeup.

Stops in about 16 feet

At the end of the roll, infrared sensors signal the camera to stop instantly. Mid-roll stops: from 300 fps, the W12 stops in about 16 feet. It also gets from 0 to 300 fps in around 16 feet. Consistent control; and *no wasted film*.

Magazines

All W12 magazines are identical 1000 footers, gear-driven by

motors inside the camera body. Feed and takeup magazines are separate. You mount *two* on the camera body—a full one for feed, an empty one for takeup.

Choice of lenses

The W12's mirror takes up more space than standard mirrors. Nevertheless, there's a generous choice of lenses. You can use our 14mm Zeiss T2 and our six Zeiss T1.3 Superspeeds from 18 to 85mm (including the new T1.3 65mm). Among our spherical and anamorphic zooms, eighteen different types will work. In telephotos: twenty-two different types, from 150 to 1600mm.

PL mount advantages

You can color-match your W12 footage with your 535, Moviecam or 35BL footage. And you can save money by not having to rent a separate set of lenses.

System accessories

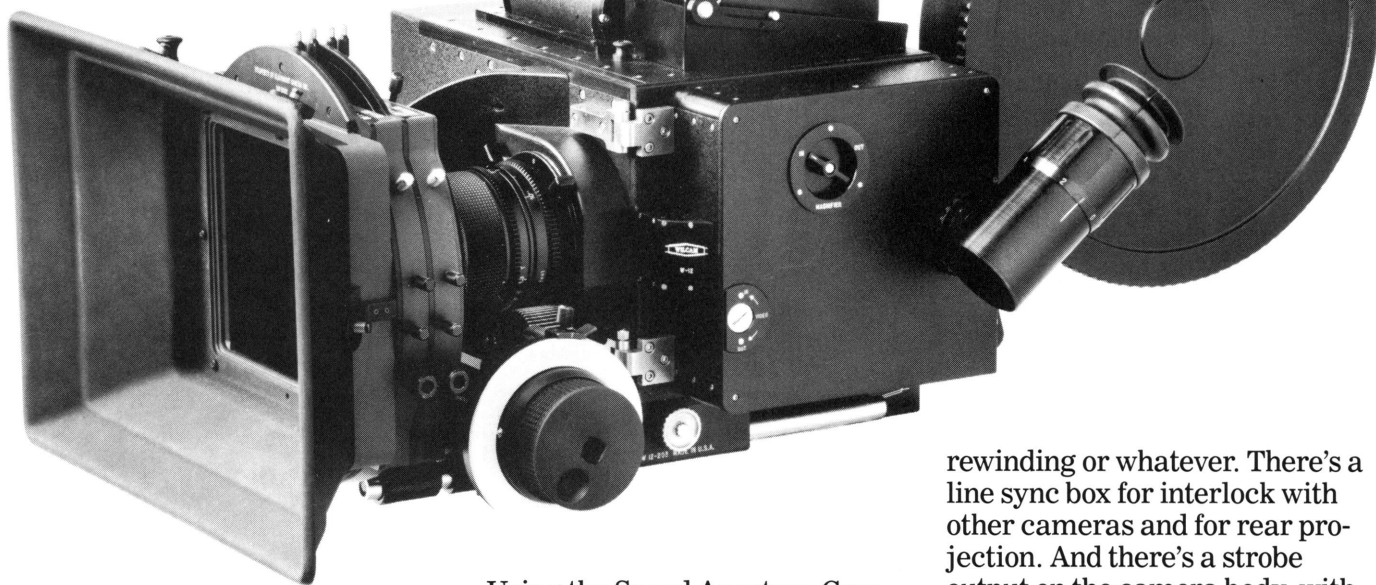
The W12 works with the ARRI mattebox and follow-focus. You can mount all the effects filters you're used to mounting on the ARRI 3. If you're also shooting with one of our sync-sound cameras, you can use the same accessory system you've rented for that camera.

No technician or AC power needed

Another way you save money is by not hiring a special operator/technician. The W12 doesn't need one. It also doesn't need AC power. It comes with a 48V battery that will run about 10,000 feet of film on one charge. Or you can yoke two standard 24VDC batteries together.

Rotating finder, up- right image, video tap

The viewfinder system and video tap camera are enclosed within



the camera body door. There's a knob with two eyepiece image modes: normal and ten times magnified. The viewfinder rotates through 270 degrees and the image stays upright.

29,600 speeds, all crystal controlled

You enter the speed you want on the camera's electronic control panel. The digital readout displays your choice, to two decimal places—hundredths of a frame. (Between 4 and 300 fps, you therefore have 29,600 speeds to choose from!) All with the perfect accuracy of crystal control; no problem with HMIs.

Variable speed

When you change speed during the shot, the transition is smooth.

Using the Speed Aperture Computer, you can change from any speed to any other speed between 4 and 300 fps, in tenths-of-a-frame increments. The starting and ending speeds are crystal-controlled. And, of course, the lens iris is changed to keep exposure consistent.

Strobes, Remote and Interlock

Accessory connection is via the 19 pin Galloway Group Interface. With an accessory box, you can make precise frame counts, for

218 miles per hour

With every pull-down at 300 frames per second, the film accelerates to a speed of 218 miles per hour and then stops again. The W12 uses 8 claws (4 a side) and 2 register-pins.

rewinding or whatever. There's a line sync box for interlock with other cameras and for rear projection. And there's a strobe output on the camera body, with settings for one or two pulses for each pulldown/exposure cycle. There's also quartz-locked remote control.

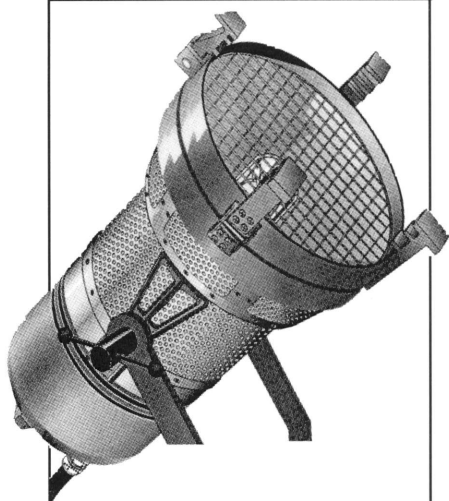
Doesn't brew coffee

There are a few things this camera *won't* do: It doesn't run in reverse; you can't shoot time-lapse, single-frame or time-exposure with it. And without a lens or film but with two magazines, it weighs 77 pounds; so you almost certainly won't want to hand-hold it.

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Letters

The ABCs of Cinematography

I have been a professional cinematographer for over eighteen years. Through the years there have been many people in the entertainment industry who claim to be artists. Those so-called artists are nothing but the other type of artist as we know them to be. They have no love or respect for the many fields in the entertainment industry, except for the love of money. There are only a very few individuals in the entertainment industry, myself included, who are true artists. I consider ourselves to be a part of a dying breed. It is a shame how the entertainment industry has so-called progressed over the years. Also, there are so many people out there who claim to be cinematographers, but do not have the qualities a true cinematographer has. [A true cinematographer is:]

- courteous
- intelligent
- noble
- energetic
- mature
- ambitious
- team player
- organized
- generalist
- reliable
- artist
- patient
- healthy
- ebullient
- responsible

— John E. Travelli
Guttenberg, NJ

Praise for Interviews

I would like to take this opportunity to commend you on your excellent Q and A articles in your February 1995 issue, as well as the DP to DP conversation in your January 1994 article on *The Pelican Brief*. I encourage you to continue this excellent kind of investigative writing in which my fellow cinematographers and I would like to read more about the hows and whys of our craft, rather than

the usual emphasis on film stocks and cameras. I also agree with the fellow reader who commented that the preoccupation with makeup effects and computer graphics finds little interest among the vast majority of cinematographers who turn to your pages for wisdom and encouragement in their challenging craft.

I'm looking forward to many more excellent articles.

— Milton Kam
Briarwood, NY

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Survivors of the Shoah Visual History Foundation, founded and chaired by Steven Spielberg, is a newly formed non-profit organization dedicated to creating the most comprehensive video archive of Holocaust testimonies ever assembled.

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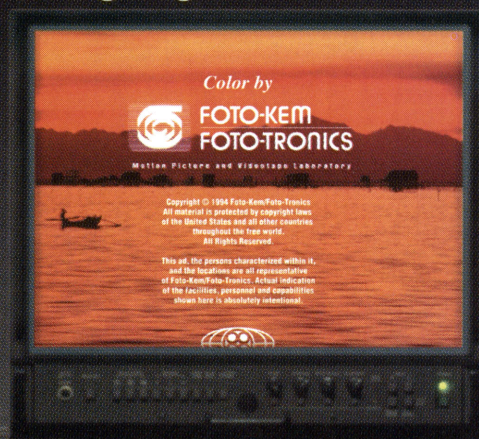
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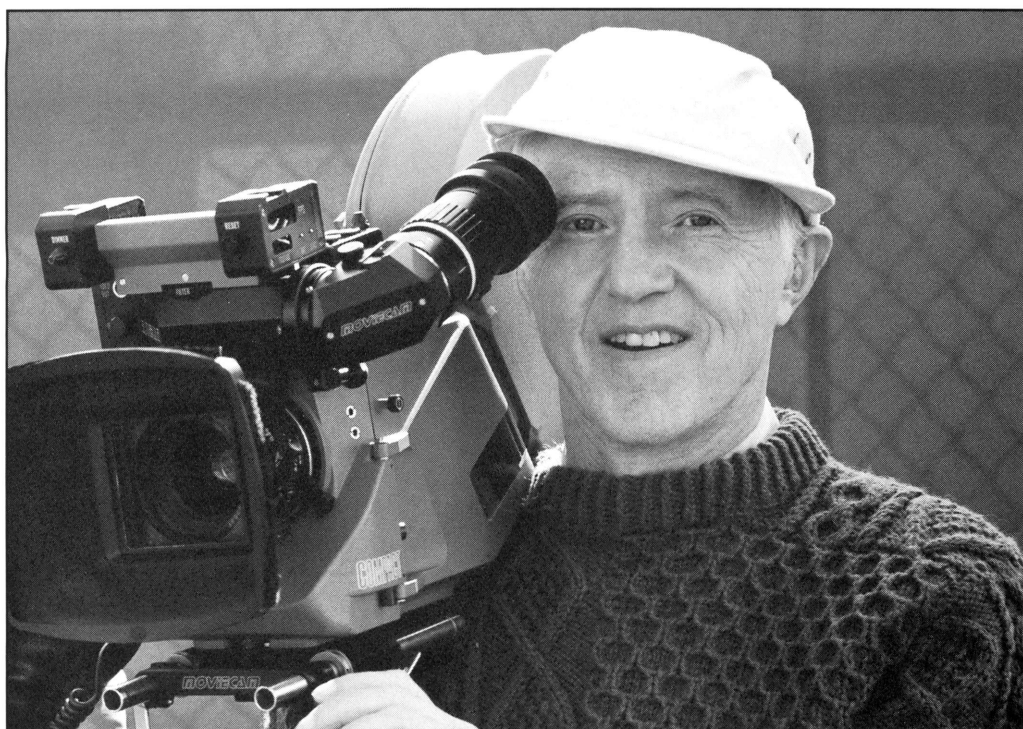
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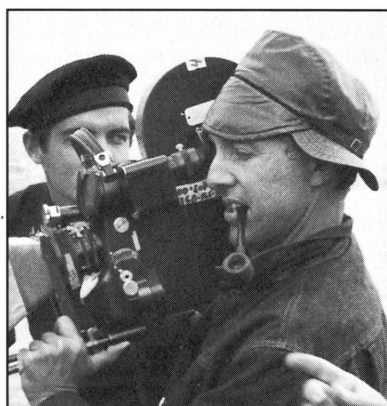
Haskell Wexler's cinematography has won two Academy Awards and five Nominations. The Awards are for *Who's Afraid of Virginia Woolf* and *Bound For Glory*. His three most recent Academy Nominations were for *One Flew Over the Cuckoo's Nest*, *Matewan* and *Blaze*. One of his documentaries also won an Academy Award. He wrote, directed and co-produced the features *Latino* and *Medium Cool*. His two most recently released feature films are *Other People's Money* and *The Babe*.

Haskell Wexler ASC explains why he bought his Moviemcam Compact

"If I had to make a film with just one camera, the Compact would be it," he says

"Why do I like to own my cameras? I know it doesn't make a lot of sense," says Haskell Wexler. "I like to feel they're my personal instruments."

"And I want to know everything that happens to them. People sometimes ask if they can rent one of my cameras, but I never want to do it. That's been my attitude right from the start, which was a windup Bell & Howell."



Shooting *America America* with one of his five Eclair CM3 cameras. Pointing hand lower right belongs to Director Elia Kazan.

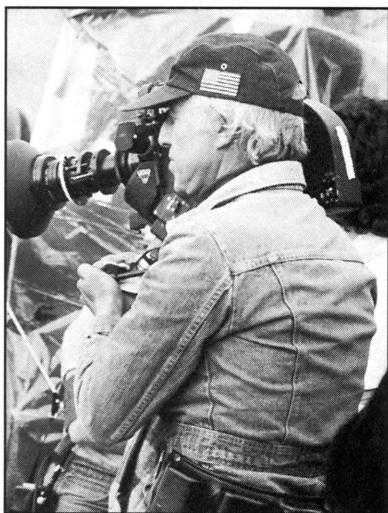
"Then came a Bolex, a Mauer, a Pennybaker Auricon, an NPR, an Aaton 16. My first 35 was an ARRI combat camera. I've had Arriflexes all my life—and still do. At one time I owned five Eclair CM3s. I've shot a lot of pictures with those and I still use them."

"In 1992 I went to a USIA film seminar in Berlin. Ted Churchill and Denny Clairmont had told me about the new Moviemcam; so after the semi-

nar I went to Vienna to look at it. I didn't expect to buy one then, but I did; and I've now shot two features with it: *The Secret Of Roan Inish* and *Canadian Bacon*."

"Neither of those is out yet; both were tough on equipment. We shot *Roan Inish* on the rocky Northwestern coast of Ireland—lots of salt spray and steep terrain. Much of *Canadian Bacon* was shot in extreme cold. The Compact worked perfectly."

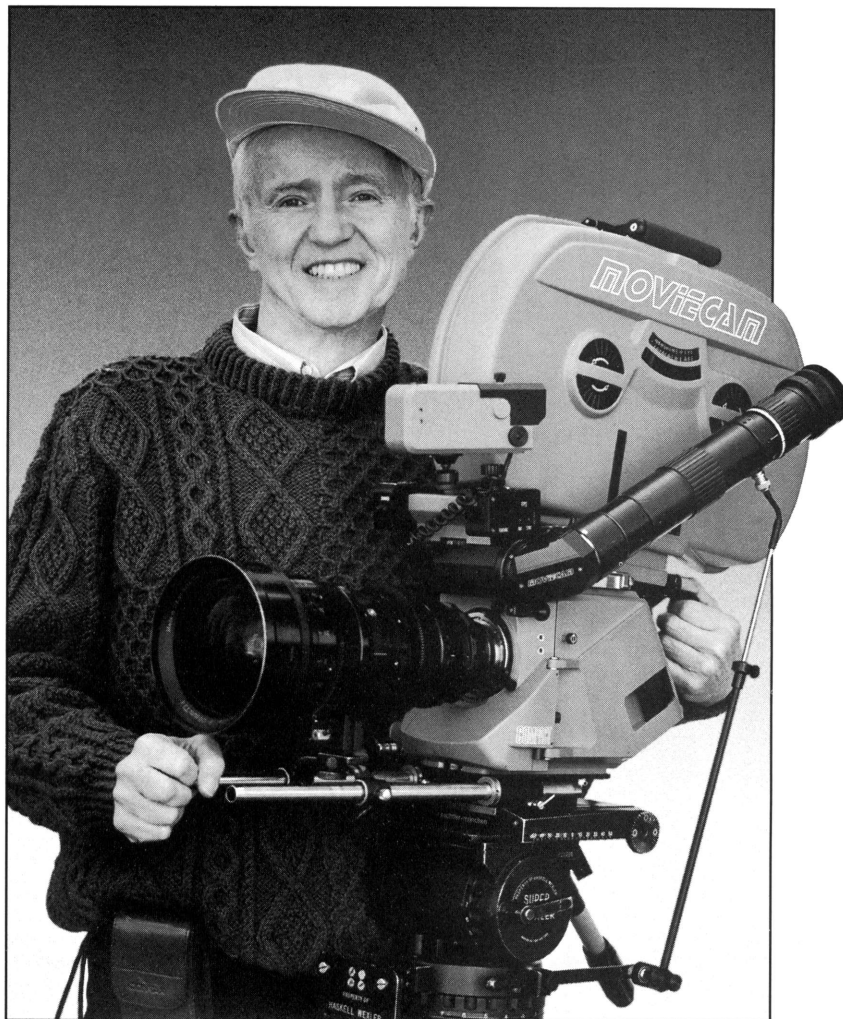
"I used it even when there was no dialog. I like to shoot MOS scenes while the actors aren't



With his 16mm NPR. He's made 30 documentaries, bringing that technique to his cinematography and direction of feature films.

Where to rent Moviecam:

Camera Service Center, New York City
Cine Video Tech Inc., Miami, Florida
Clairmont Camera, N. Hollywood, Calif.
Clairmont Camera, Vancouver, Canada
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aware we're rolling. The Compact was so quiet and so well-balanced, I could shoot unobtrusively, hand-held."

"In essence, here's what I found: Those things the other production cameras don't *quite* do—really being quiet, or really being hand-holdable, or really being Steadicam-

friendly—the Moviecam does. And it does them all well."

"If I had to make a film with just one camera, the Compact would be it," says Mr. Wexler. "Apart from my house in Santa Barbara, it's the most expensive thing I own. It's also the single best camera I've ever owned, or rented."

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The Modular Compact

Post Effects for Cars, Spaceships, Muppets . . .

compiled by Marji Rhea



Photo courtesy of Balsmeyer & Everett

Sesame Street Opening

Director Randall Balsmeyer of Balsmeyer & Everett, Inc., recently designed, directed and posted two new vignettes for the modular show opening for *Sesame Street* which his firm designed two years ago.

Children's Television Workshop coordinating producer Arlene Sherman chose Balsmeyer & Everett to develop storyboards for the new segments, then worked with Mr. Balsmeyer to plan the shooting and completion of the sequence. One of the goals of the new opening was to introduce two new muppet characters, Zoe and Natasha.

The show opening was designed as a series of visual layers: a live-action background with children playing, a foreground layer of puppet characters who "live" at the edge of the viewer's TV frame, and, in between, animated elements which serve as the connection between the muppets and children and bridge the various scenes which make up the sequence. In each of the opening's nine scenes, something magical or fantastic happens. The sequence was designed to convey the purpose and personality of the show in a 60-second nutshell.

In the first new segment, Zoe

looks on as two children eating ice cream cones are walking by a construction site. On the construction wall are circus posters featuring images of lions and elephants. While the children peek through the holes in the wall to look at the site, a lion and an elephant from the posters on either side of the children come alive, via 3-D computer graphics, and lean out of their posters to take a lick of the kids' ice cream cones. When the surprised children look to see what happened, the lion and elephant have returned to their posters. Zoe sees it all happen, jumps up laughing and pulls down the corner of the frame to reveal the next segment.

The second new segment finds a group of children running a foot race. As they round the last turn heading toward the finish line, the camera booms down to reveal the real winner: a crawling Natasha. As she crosses the finish line, she reaches up to grab the finish line tape and pulls it down, wiping in the next segment.

Because of the special effects involved, production of the sequence had to be tightly planned and organized. For the race segment, the children and the muppets were photographed using motion control, at both Riverside Park in Manhattan and in the studio. The foreground elements were all shot using the Ultimatte process to generate matte rolls so that they could later be married with the backgrounds. All original elements were shot on video (Beta SP).

Once the various elements were shot, Balsmeyer edited the sequence offline and supervised the production of the computer-generated elements, which were produced by Syzygy Digital Cinema. Michael Arias, Syzygy's director of animation, created the 3-D animation using Softimage's Creative Environment software on SGI workstations. Arias created the circus poster in 3-D from a design by Balsmeyer &

Everett's Lisa Lucas, modelling the elephant and lion and then animating the completed characters. The CG posters were digitally composited with the construction site wall into the matte areas created during the Ultimatte shoot. Arias also created Natasha's finish line ribbon as a CG element. The final elements were brought together and edited online by Ralph Scaglione, under the supervision of Balsmeyer, at Sony Music Studios.

Randall Balsmeyer and partner Mimi Everett have also created title sequences for feature films such as *Fresh*, *Short Cuts*, *M. Butterfly*, *Crooklyn*, and *Naked Lunch*, as well as visual effects for such films as *Dead Ringers*, *Ghost* and *Alice*.

For information: Balsmeyer & Everett, Inc., 230 West 17th St., New York, NY 10011, (212) 627-3430.



Photo courtesy of Xaos

Cookie Creature

Currently jumping onto TV screens and Nabisco cookie packages nationwide is the Nabisco Thing, a new character created by FCB/Leber Katz Partners and brought to life in a 30-second spot by Xaos, the computer animation and design facility. The Nabisco Thing, a 3-D animated character, interacts with live-action kids in an imaginary, fantastic world that could only be designed inside the computer. Xaos worked closely with FCB's Tony Macchia and Miguel Noguerras from the design stage through the completion of the complex

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spot to create the memorable character and the wild, fantasy environment.

The spot opens as the Nabisco Thing emerges from the logo on the corner of a Nabisco cookie package (his head a 3-D version of the logo) and wiggles out. Throughout the design and production process, the Nabisco Thing developed personality traits, while his form and motion became more complex and sophisticated. He uses his antenna, a signature characteristic, to produce cookies and transport himself and kids to magical spaces. Another noticeable feature is the colorful, globular moving texture on his 3-D body.

The Nabisco Thing magically transfers himself and two children, which had been shot live-action against blue screen, to an ethereal world. This was accomplished with a Xaos image processing effect known as "Warpo," which creates a beautiful liquid transition. The kids float around in this 3-D space surrounded by cookies and cookie packages, and fly through the Nabisco Thing's head to a 3-D abstract environment, where they play within a kaleidoscope of cookies and colorful globules.

The spot combines live action with character animation, image processing, and particle systems animation. The kids were shot in New York by Santiago Films director Doug Coleman and later integrated into the 3-D environment created by Xaos. Beforehand, Xaos had created wireframe models of the kids and cookies in the computer. They based the timing of the live-action shots on these motion tests to make sure that the integration would be accurate, as kids spin around on cookies, fly through the air surrounded by cookie packages, and interact with the Nabisco Thing. Finishing touches were added in post at Western Images, where Flame and Harry were used to do some compositing and to add sparkles throughout the spot.

For information: Xaos, 600 Townsend, Suite 271E, San Francisco, CA 94103, (415) 558-9267, FAX (415) 558-9160.

Animating Machine

Medialab, a subsidiary of Paris-based Canal+, the world's largest pay television company, will soon have an office at Le Studio Canal+ in Beverly Hills. Medialab has served as a "media kitchen" for its parent company, where it

has created digital imagery, interactive products and user interface software, and is debuting its real-time, full-figure live-animation computer system. The new system will present a human actor in a full-motion computerized body suit, performing as a virtual puppeteer, animating a 3-D character live and in real time.

The computer-generated characters designed by Medialab can be integrated into feature films, television sitcoms and dramas, animated television series, video games, CD-ROM, and

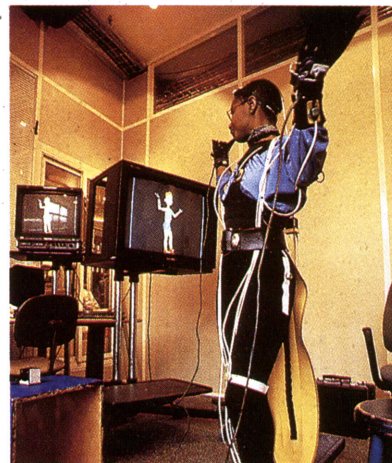


Photo courtesy of Medialab

theme parks. Unlike traditional frame-by-frame animation, the software invented by Medialab employs motion capture and puppeteering to directly drive the computer-generated characters. The result of this is visualized instantly onscreen, allowing for the computerized actor's immediate direction, which can include the characters' body movements and facial expressions, lighting and camera motion.

The system can be installed into any studio setting, and/or animation can be provided at one of the company's facilities in Europe or the U.S. Medialab can deliver an integrated computer animation system comprised of a graphic station, real-time animation software, devices ("motion captors"), and a library of existing characters to the location of any potential client. The company can create a brand-new character within one to two months and within one day, using the real-time animation system, can create up to 20 minutes of computer-generated character animation.

For information: Le Studio Canal+, 301 N. Cañon Drive, #228, Beverly Hills, CA 90210, (310) 247-0994, FAX (310) 247-0998.

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Car Spot

Complete Post of Hollywood and Miller/Wishengrad/Peacock recently teamed up to post four 30-second spots promoting the Chrysler Neon, in which a sports car zips about the countryside like a character in a Saturday morning cartoon. Quantel PaintBox and Henry effects help create the cartoon look for the campaign, conceived by ad agency Bozell Worldwide.

The spots promote two versions of the Neon, the original model and a new sportier version. In "Flag," the two cars are parked on a country road flanking a spokesman, the sports car version of the Neon draped with a large black and white checked flag. As the spokesman describes the cars' features, the flag lifts off the car and hovers in the air. As it does so, the car suddenly spins about and drives off in the opposite direction at an exaggerated speed. It's then seen blazing up and down country hills like a cartoon rabbit.

The cartoon style is carried through to the scenery that surrounds the car. The grass is uniformly green, the sky a deep and unblemished blue, the road as smooth as a billiard ball. Since no such location exists in the real world, it had to be created in Complete Post's Quantel PaintBox/Henry suite. Each scene is made up of dozens of separate elements composited together: small patches of grass were multiplied to create a perfect field of green, inconsistencies in the color of the sky were corrected, and blemishes in the road surface removed.

"Because the spots were shot at a real location over the course of many hours, there were variations in sunlight and atmosphere," says Miller/Wishengrad/Peacock's Jeff Wishengrad, who edited the spots and supervised the effects work at Complete Post. "It took a lot of compositing work and rotoscoping to remove all those variables and create a perfect environment."

Complete Post's effects team also used the PaintBox/Henry to create some of the "go-motion" effects in which the car appears to move impossibly fast. Scenes where the cars appear to speed by the nonchalant spokesman were created by compositing images of the cars shot in fast motion into a scene with normal-speed images of the man. The cars' spins were created in a similar way.

In production, the cars were placed on a rig and spun at low speed. Wishengrad sped the scene up by pulling individual frames from the sequence and jump-cutting them together. Complete Post's artist then used the PaintBox to paint out the rigs and paint in blur lines in the characteristic cartoon fashion. As the spots were essentially wall-to-wall effects, the spots emerged from the PaintBox/Henry in final edited form.

For information: Complete Post, 6087 Sunset Blvd., Hollywood, CA 90028-6475, (213) 467-1244.

Neon Spot

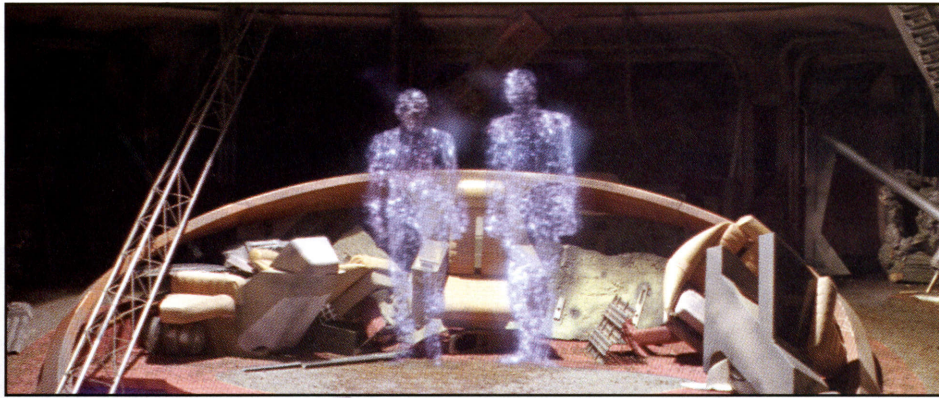
Boss Film also used visual effects, computer animation and motion control photography to make a Chrysler Neon car change colors from white to black and from a four-door sedan to a two-door sport coupe as it cruises down the highway.

Designed to introduce the Chrysler Neon two-door sport coupe, the shoot utilized a moving "beauty" car and a moving camera car. "We had to make a precise match in order for the color change to work when we got to the computer animation process," says director Terry Windell. The agency asked that the change occur seamlessly, without any edits, in full movement with the camera rotating around the front of the car from the driver side to the passenger side.

On the Boss stages, technicians manufactured a hybrid three-door car frame called a "buck," which consists of half of a car chassis of fenders, hood, bumper and grill. In order to have the proper geometry and perspective of the car as well as maintain smooth transitions during the actual filming, which was necessary during computer animation, Boss used a gyro-stabilized 35mm Spacecam mounted on a camera truck to execute the multiple driving shots which were done on location at the Humboldt County airport in Northern California. Additional shots were filmed around Marin County.

"We had to geometrically match the coordinates from the car buck with the film registration of the original car in order to successfully make a perfect one-to-one match film print," says Boss founder Richard Edlund. "As the beauty car changes lanes and magically changes colors, our CGI computer graphics and animation efforts are critically

Transport Between The Worlds



"Star Trek Generations" Paramount

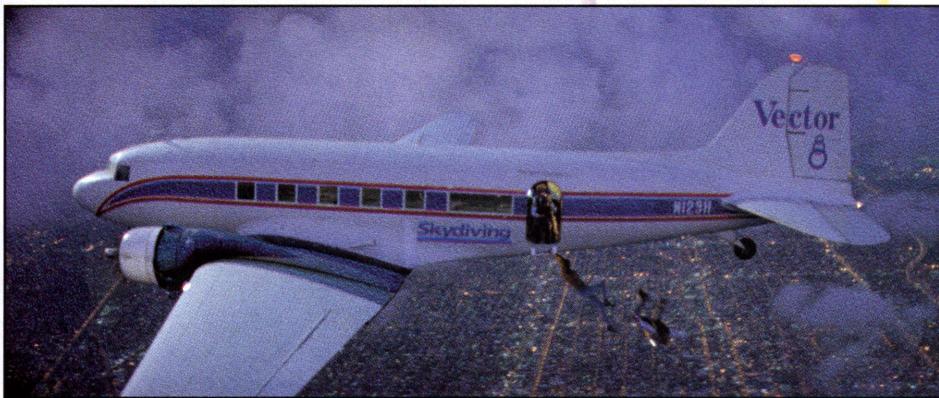
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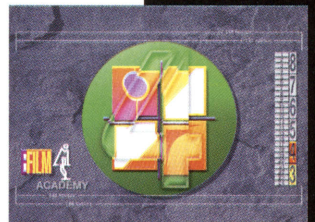
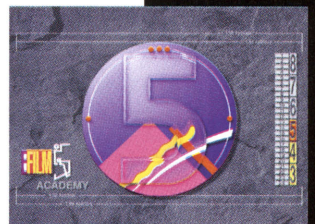
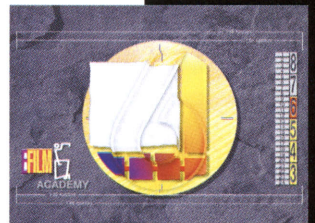
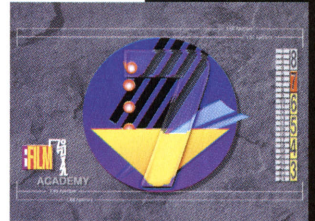
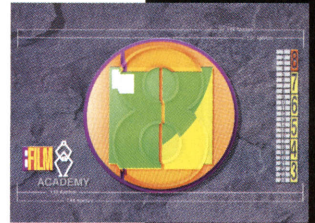
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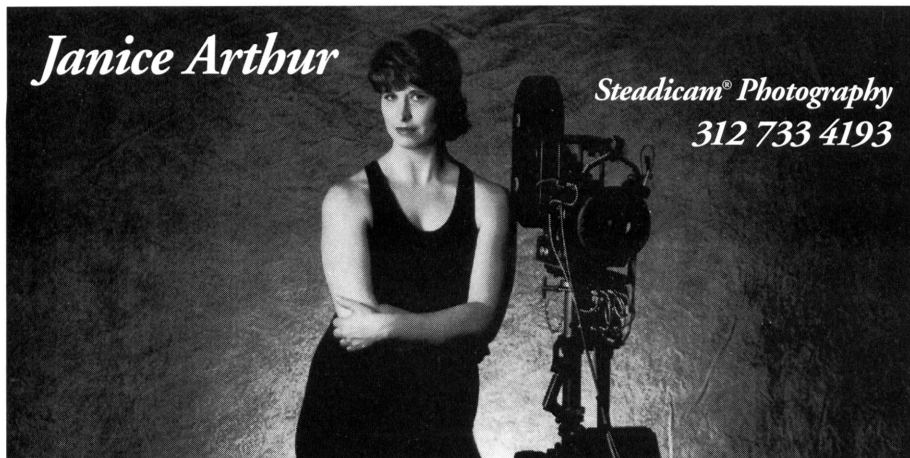
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Boss created what is believed to be the first CGI registered electronic print which was actually viewed through the camera by using a specially designed fiberoptic device. Ed DiGiulio of Cinema Products provided the fiber bundle and the Boss team engineered a precise mount for the stage camera. The registered print was then fed into a SGI platform via Galileo video equipment to give Boss complete digital control of all the elements of the commercial.

"The key to this commercial was to register the location footage to the motion-control elements during the match move," Edlund says. The "fiber tap" was used in place of the camera movement during this portion; in doing so, the team could be sure the two elements would match during compositing.

After scanning the location footage into the computer, Boss technicians tracked discreet targets and car surface features to generate a move file. This data file, calibrated and registered to the motion-control stage setup, was used as the basis for the match move shot later with the car buck. This gave the team the flexibility and freedom to shoot the car any way they wanted on location without the limitations of a bulky motion-control rig.

Boss went to Sight Effects/Digital Lab in Venice for the final post computer-generated touches. Alan Barnett did the final edit with the use of Flame software to steady all the action, as well as to enhance and achieve a realistic look during the car's color transition.

For information: Boss Film Studios, 13335 Maxella Ave., Marina Del Rey, CA 90292, (310) 823-0433, FAX (310) 305-8576.

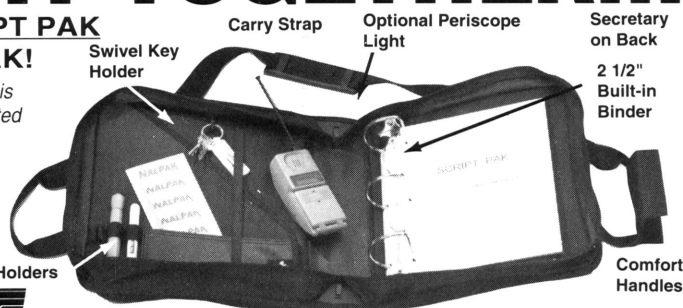
Star Trek Voyager Opening

Santa Barbara Studios has used Wavefront Technologies to create a special-effects-laden opening sequence for *Star Trek Voyager*, the latest *Star Trek* series. The complete title sequence is composed of six individual spaceship shots and depicts the Voyager ship traveling through the far-reaching galaxy, past solar flares, gaseous effects, planets, and through planetary rings. These scenes used Wavefront's Dynamation, Composer and Advanced

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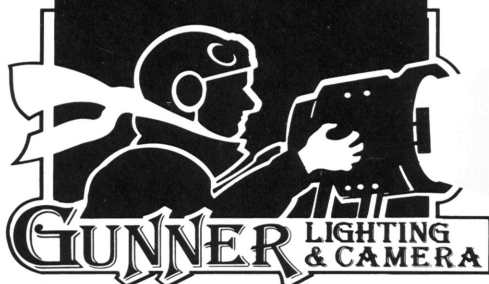
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Upcoming Events

Ongoing: the Festival of American Short Films in New York, one night a month at the Nuyorican Poets Cafe, presented by the Short Circuit Film Festival. For information: The Short Circuit Film Festival, (212) 473-8980, FAX (212) 473-8957. Also appearing in May in Baltimore at the Walters Art Gallery.

April 7-May 13: Spike and Mike's 1995 Festival of Animation, San Francisco. For information: (415) 957-1205, FAX (415) 957-1520.

May 3-May 14: Philadelphia Festival of World Cinema, featuring screening of Krzysztof Kieslowski's *The Decalogue*, Festival of Independents, and the "Set in Philadelphia" screenwriting competition. For information: (215) 895-6593, FAX (215) 895-6562.

May 5-6: Television Lighting: Concerts and Special Events, Weekend Workshops in Design and Technology, Jackson Hole, WY. For information: FAX (212) 229-2084.

May 12, 13, 14: Ken Russell Tribute, American Cinematheque at the Directors Guild Theater, Hollywood. For information: (213) 466-FILM.

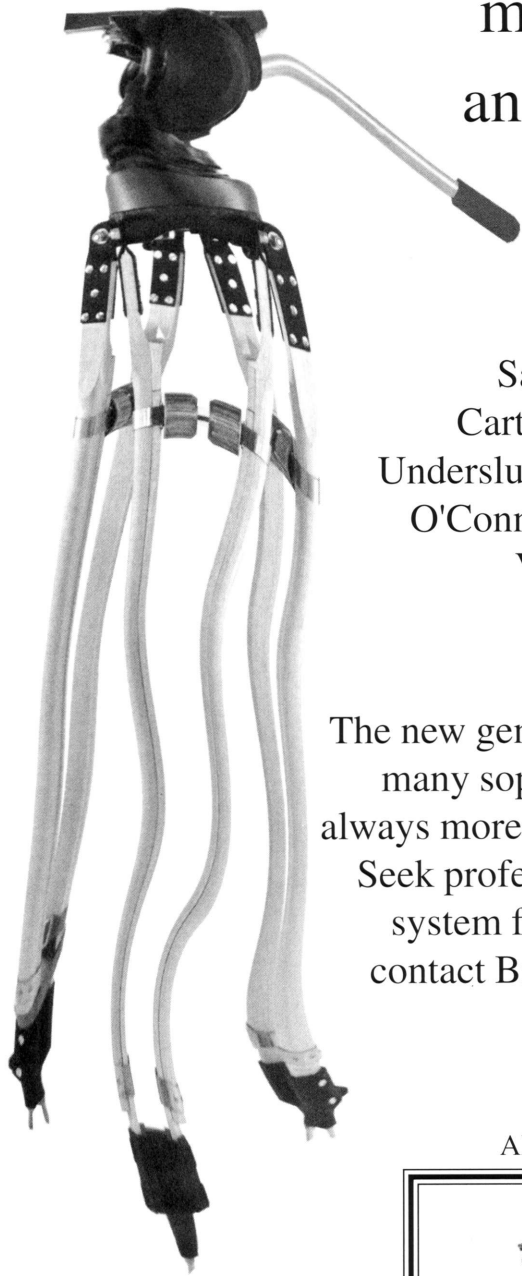
May 15 deadline for entries: Videonics' Thoughts and Dreams 1995 School Video Contest for middle and high school students. For information: Videonics, Inc. 1370 Dell Ave., Campbell, CA 95008, (800) 338-EDIT.

May 21-June 24: One-week workshops at the International Film & Television Workshops, Rockport, Maine, (207) 236-8581. Subjects include Avid Media Suite Pro, 35mm and 16mm film and video camera operation, Video Toaster, cinematography, editing, and documentaries.

May 31 deadline for entries: 11th Annual International Documentary Awards. For information: (310) 284-8422.

June 8-13: 19th International Television Symposium and Technical Exhibition, Montreux, Switzerland. For information: 41 21 963 32 20, FAX 41 21 963 88 51.

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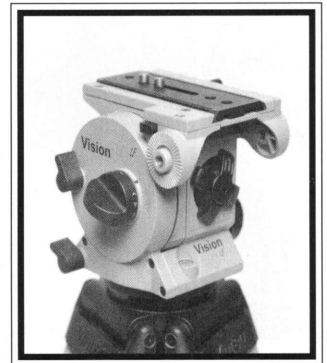
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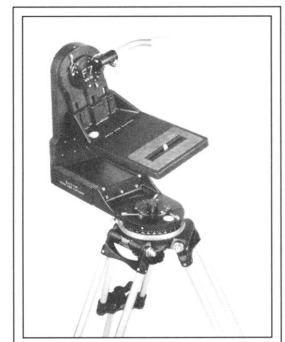
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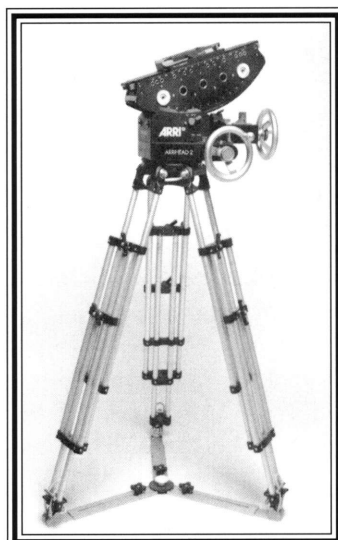
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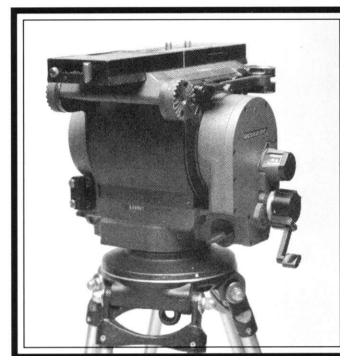


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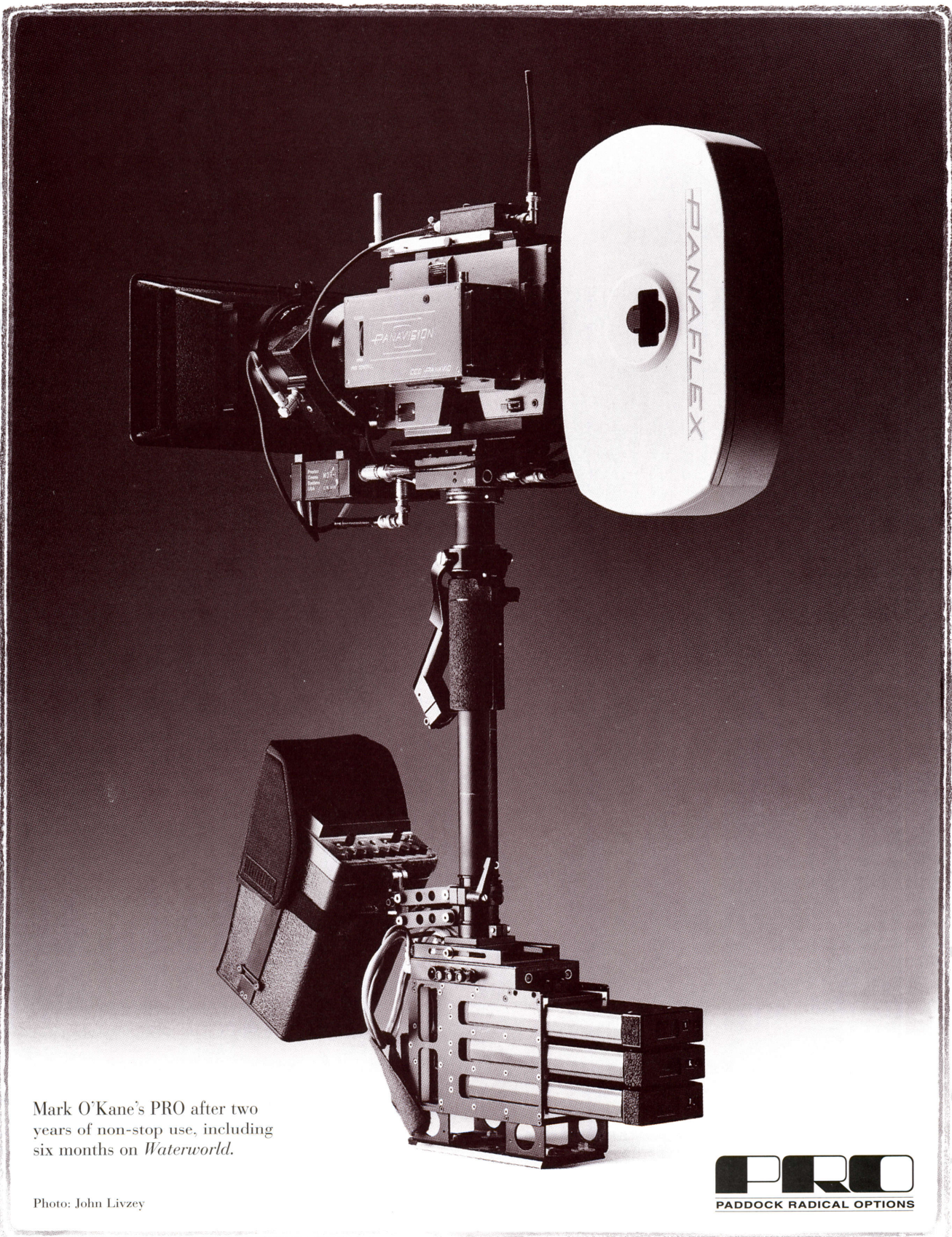
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On the Warner Brothers' lot in 1939 there was a film laboratory that employed less than 50 people. The effects department consisted of a dozen or so practitioners of the dark art known as "trick shots." There were 21 film editors and 21 assistants. This was the world of postproduction, a world that didn't change much over en-

Harrison Ellenshaw: Will digital technology in postproduction and effects increase or decrease the artistic input of the collaborative filmmaker?

Russ Carpenter: We're looking at a new art form. We're talking about the collaboration of the production designer, the director and the cinematographer. If it's

things can get out of control faster in the digital domain. It can take a left turn on you before you realize it on the digital street. So the important thing for people involved in the production side of it, which generally happens way before I get involved, would be to really know what it is they want, because with the digital technology, we now have the capability of doing things a lot faster and a lot bigger, and that includes mistakes.

One of the final points to be addressed is that film is still with us. It will be with us for quite a while. Even if some people take potshots at it, I still believe in film, the film look. The way I look at it, a lot of the digital stuff is just tools — tools to achieve particular goals.

I also don't believe in digital for the sake of digital. Often when somebody says do it digitally, it doesn't have done that way. Just because you can do it digitally doesn't necessarily mean that it wouldn't be better to set it up in front of the camera and shoot it.

Ellenshaw: Brad, from your perspective as a creative director, do you ever have an occasion where a client comes to you with their vision of a shot, and you put it together, but you feel that their vision is not what you would have done?

Brad Keuhn: Well, yes that's it. That's why at Cinesite we're always trying to hook up with the director or the visual effects supervisor and understand what their vision is. That's one of the most difficult things. Movie-making is storytelling from the director's point of view. So we have to deal not with what we want to do with the movie, but with what they want to do. We have to extend what they want to do with the movie — not make it my vision, but make it their vision. That's probably one of the most important things to us.

As far as digital cinematography goes, if it's used properly it's definitely an extension. When digital first started, it was done mainly by computer people, because they were the only people who could understand how to manipulate images digitally. People

Wielding the Double-Edged Sword: Digital Post and Effects

As the technology evolves and the line between post and effects blurs, how is the cinematographer affected?

tire lifetimes. This short list of people handled the cinematographer's film after production, and worked it into a movie, using chemical baths, razor blades and the optical printer.

The current pace of change in the world of post is almost frightening. We can take solace only in the fact that it changes just as fast for everyone else. As digital technology gives post professionals more leeway to alter the cinematographer's images, some cry foul, and others see opportunity.

To help keep the lines of communication free and flowing, the ASC and the Eastman Kodak Student Program hosted a seminar on the topic on February 11 at USC's Norris Auditorium. Moderating the panel was Harrison Ellenshaw of Disney. The panelists were Andrea D'Amico of Pacific Ocean Post; Russ Carpenter, cinematographer; Greg McMurry of VIFX; Brad Keuhn of Cinesite; Marvin Rush, ASC, cinematographer; ASC associate member Lou Levinson of MCA/MEI HDTV Research Facility; and Neil Krepela, ASC, of Boss Film.

What follows is a distillation of the event, featuring highlights from the panel discussion and the subsequent question-and-answer period.

not a collaboration, then, yes, we all have a lot of individual turf to protect. So as an individual I'm asking, how much is this picture going to change in postproduction? What happens if I walk in one day and somebody surprises me — for example, if I can see the actors' eyes in a scene and in my vision I did not want to see the actor's eyes. He's been lightened up. That's a real issue. And as an individual and hopefully an artist, I feel like, "Hey, what about my input?" In that case, I would lose a lot of territory, and a lot of the reason I thought I was making the film in the first place.

For me, you need to form a relationship with the director, with the production designer, with a post/effects facility where the communication is. So I welcome the digital revolution, and yet I have some trepidation.

Lou Levinson: To answer the question, yes, it can be better. Technical horizons have expanded and wonderful things are possible — anything that can be imagined. I would agree with Russ that in part it will depend on the cohesion and the vision of the individuals. As the digital age comes into being, for a while, if you get involved in a project where there isn't a particular cohesion, it will probably be a bigger mess than you could ever imagine simply because certain

who are computer people don't have a film background, and they don't have the type of background to extend the vision of the cameraman. Probably half or more of the people here have Photoshop at home, or similar software. In today's world, the software is much easier to work with. So even in our facility, all you do is move sliders around. You don't need to know computer code. We can sit down with the cinematographer or director — whoever — and even have them play with the dials if they want to. They can make the picture look the way they want it to.

Today's tools are getting better and better. We are expanding the movie process, the storytelling of the movie, and we're trying to make sure that when visual effects scenes come up, they don't jump out at the audience.

Ellenshaw: Greg, you have seen both sides of film and video. There is a tendency here for all of us to say that it's getting better, so now there is more emphasis on how the collaboration works. We heard Russ say that you're only as good as the collaboration, because it's no longer about the hardware and the software. Are we past that? The revolution is over? What's your feeling?

Greg McMurry: I've always felt there are two big areas of work that we do on features. There's what we call the visual effects — where we fly things around, make it beyond belief that we manufactured it in our facilities or manufactured in our minds and put it on film. And then there are the other shots that are in dozens of films, in which we don't see any of the effects.

I think the digital revolution has broadened that second category incredibly. Having been in video for ten years and in the film business for about thirteen years, I find that the most challenging. It's no longer fun for me just to put some effect in front of your face and have people walk out of the theater saying, "Oh, those visual effects were something." I have more fun creating the scenes that we discussed in preproduction with the director, photographer

and production designer, saying, "How can we do this?" That's where I find the collaboration to be the most valuable.

As a visual effects supervisor, I try to get involved in the very, very early stages, to avoid having a photographer come back later and say, "You know, what I really wanted was to see that guy's eyes within that shot." I've been involved with the concept, so we're in sync all the way through the photography process. I'm standing next to the photographer when he shoots, making sure that I know long ahead of time, so we don't have to come back and do it again later.

The big difference between working as a visual effects supervisor on a project, as opposed to the "sweep-up" work that we end up doing on some projects, is very often timing. We're handed things that somebody has taken out in the middle of the desert. They say, "You know, we didn't realize there was going to be this power line in the background here, but we'll let them fix it in post." Those things are kind of the bread and butter of the industry, but certainly not the artistic challenge brought me into the business — to create films from the beginning with those people who pull them out of their brains. That's the collaboration, and that's what I think is most important: the very early stages.

Ellenshaw: Marvin, is the collaboration helped by everybody being forced to agree on something in a hurry, because you have to get it out there, or is it hindered by those deadlines?

Marvin Rush: There's a real problem when you have a tool that is so flexible that you can take what you did and completely change it, so that it doesn't resemble at all what you intended. As we get more and more capable, we put more and more power into the hands of the people who are not credited or given the title of cinematographer. As long as they are a servant to the image, story and vision that's fine. But it is possible and becoming more possible for someone to completely alter what was intended. I think Russ'

comment about the eyes is very valid. If you make someone's eye sockets dark and subtle and someone fixes that — or you light a scene with an HMI and you want it to be blue, and somebody times the blue out so the colors you rendered on film aren't there — it's just not fair. They are not credited with the title of cinematographer, they're not doing the job of the cinematographer, but they're ruining the work of the cinematographer. So I think it's real important that there be an element of control and I think an element of communication established, and a hierarchy of who gets to say what. I think that that needs to be addressed.

One of the aspects is numbers, the concept of standards. If you talk to somebody and you are on location talking on a cellular phone to someone in a facility in Hollywood, and you're trying to

"This is not about visual effects now. This is about a postproduction facility, that as yet does not exist, which comes out and says, 'We can take pork sausage and turn it into a vegetable.'"

— Marvin Rush, ASC

describe something visual, it's very hard to do. It's hard to explain over a telephone while people are setting up scaffolding, and you have a million things to think about, and you're trying to describe what you want them to do or not do. There needs to be some standardization of numbers so you can ask for something specific; something that is quantified and standardized in the industry. The analogy is if your lenses had no numbers on them. No focus distance, no f/stop. Collaboration is fine. The best work is unified by one person's vision on the set. First of all is the script. Second on the set is the director. The next person in line is the cinematographer, who rightly should say how it's going to be in terms of camera.

Ellenshaw: Andrea, I have a great deal of respect for visual

effects producers. But although we call it a collaboration, basically we're fighting to make the film. Unfortunately, if you've never worked with a group of people, you don't know how it's going to go, and it's a learning process. So by the time you get to the end of the film, you have either learned to work together or you all hate each other and you never work together again (laughs). Because visual effects take so many people and require such a unique interaction with the director and the cinematographer, what is the role of the visual effects producer, and how much of the vision is influenced by that person?

Andrea D'Amico: I would say that our goal is merely to provide a service to the cinematographer and the director, to do everything we can to achieve their vision. Our goal would be to make sure that in collaboration, the cinematographer gets the look of the eyes exactly how he or she wants it. And our talent is to make that happen. We are going to use the digital tools as best we can to achieve that. I think the key really is collaboration between the director, cinematographer and the community of digital artists — to keep the communication flowing and to really have one vision. There clearly has to be one person driving the bus and everybody in agreement. That's what going to make everybody happy in the end.

I would encourage cinematographers who plan to use digital tools to get to know what they can do. If it's going to be a visual effects film, know the tools so that you can use them in pre-planning shots; be aware of the effects that you can accomplish; and really be in rooms to lend the support and give the visual artists guidance, because they love to learn from cinematographers; they love to get that rich heritage.

Our focus is to give the director and the cinematographer what they're looking for. I see it as a huge expansion of opportunity. The opportunity afforded is expanding the creativity by allowing people to do things they really couldn't do before or as easily as we can do now.

Ellenshaw: Neil, I'm sure you've worked with people you have disagreed with, people who haven't done it the way you thought they should do it. And you worked at the opposite end of the spectrum, where we saw the single vision together and it was a very pleasing experience. Is there a way to avoid those bad situations? I hear everybody being nice about it, but there is probably more disagreement when it comes to postproduction visual effects than there is agreement. Any solution to this ongoing problem?

Neil Krepela: Yes. A lot of it has to do with language and getting to know what the terms actually are. The effects in films are becoming more and more realistic, rather than the fantasy elements. I think this is one of the great powers of digital effects in general, that we can make things a lot more seamless and realistic and not so much "in your face." In fact, when we used to do matte paintings, the best effect was a great matte painting that no one ever saw. On the other hand, what was commonly termed a great effect was something that everybody saw.

But the real effects that were always a joy to do were the ones that were hidden from the eye, that did not distract from the story. I'm a visual effects supervisor but I'm also a director of photography. I'm kind of straddling the fence. Right now, I carry on what the director sees as his vision in the film, but it's also what the cameraman sees. When I'm shooting plates for background elements or miniatures that have to be cut into the film, they have to have the same look. So the whole idea of collaboration is a very, very important one. It has to take place with the director of photography, but with the art department as well. Quite often we start with the art department before the director of photography is even hired. They are designing the storyboards; at that point we are kind of deciding what the shots should be, which angles; the director is working with them as well, deciding what he wants to see, what's going to tell his story. The art department is producing the storyboards — these

become the blueprint and from them we decide how we can get this shot. And this starts again on the photography page with going to the location and the set, getting the proper camera set up, photographing whatever we need; continuing on in another studio sometimes months later shooting a green screen element; and fitting all the elements together. Without collaboration, it would just be chaos. Digital does not change that. I think it makes it even more important because you are asked to do so much more and you are asked to produce much more flawless effects than ever before. It's always "I want this absolutely realistic."

A lot of thought goes into doing exactly that. Quite often the argument comes, "Well, you're not treating me that way." You go back and forth — how to light the foam, how a boat would move in the water, how a parachute unfurls, how an explosion ends, what a shock wave is. The real problems again come with some sort of subjective thoughts of what the phenomenon would be, rather than the real objective, which is studying what the phenomenon would be. So I think that tends to be the main problem. It's going back, doing the homework, starting in the preproduction phase and carrying it right through to the postproduction phase. If everybody is in sync there's never a question about changing an image, making it brighter or darker or putting some color in there that wasn't warranted. As long as people talk and work together, and the collaboration exists and everybody is in sync on what the vision of the film is, then no one is going to be disappointed.

Ellenshaw: I'm sensing a big change going on. We still have some of the "old" problems. It's ironic that the Academy recently granted branch status to the visual effects branch, a rare occasion. So rather than being this subset off to the side, effects now has a full status like acting and cinematography. For years, visual effects people have fought for a certain amount of power over the image. This goes back to the time when a

film crew shot a plate on location and the producer decided not to bring along the visual effects person because they didn't want to pay them the money. So the crew shoots the plate, moves the camera all over the place, and sends it back to the visual effects person and says, "Here, add a matte painting." And everybody throws up their hands, saying, "It's going to cost \$100,000 to track the image because there is movement. It's been going on like that for a long time."

Then digital came along and everybody said, great, we can move the camera and you can track the image, it won't be a problem. So we still don't need you. Visual effects people responded by saying "Yes, there are still parameters that need to be followed if you want to get a good image." Visual effects people understand the process and want to help. But that was perceived mostly as a threat. So we're still back to where we started from. Today, though, we have more status for visual effects people.

So now I will ask if the reverse should be true. Should we go to the Academy and say get rid of this visual effects branch because, as Brad says, we want the cinematographers to be there all the way through the postproduction process? We want them to slide the sliders, dial the knobs and make all the decisions and make sure the eyes stay dark. Why don't we have them put the shot together and we'll step aside? I'm willing to do that if that's going to produce a better image. I'm being a little outrageous here but the point should be taken that we just can't sit around and say "We have to collaborate" or "We've got to understand" because we say that and we don't always do it.



Krepela: For the most part, the effects process even in the digital age is still very laborious. It takes time. You set up a series of lights, choreograph the action and the camera movement, load it and shoot it in a matter of hours. But to add something to that scene takes weeks on a computer — just to render, light, texture map, matte in, animate, and add the grain to the 3-

D image to make it look like real, generate some tables so that when the thing's photographed back down it looks like the rest of the photography. A lot of attention is given to that. No one just kind of goes off on their own. No one wants to truly invent things for a film because it won't fit in. It would be a waste of time.

Ellenshaw: Andrea, should we start getting rid of some of these effects supervisors; these creative directors; these people who screw up the image rather than hold it intact and carry it forward?

D'Amico: The question becomes, should we combine the two jobs? Should the cinematographer also be the visual effects supervisor? Certainly we need someone to track through the whole film and make sure the effects are done. We have to look at the budget considerations. Is the cinematographer going to be able to be with the show to the very last minute in which the visual effects supervisor often has to be if he or she is supervising causes and effects? That's a luxury I don't think everyone has.

They really are two different jobs. There are people like Neil who do both, and the rest who do one or the other. Often you need a specialist in each case. With certain pictures the visual effects are so numerous that you really want to have someone to be on the set to supervise it and then also show up in the sessions for the compositing, to really let the compositing artist know what is supposed to happen. I don't think we should eliminate the effects supervisors. They provide a very unique role.

The service they provide is very useful — the director will change his mind and ask the effects supervisor, "Can we do this? What will be involved?" And if they can pull it off, they will. But it's good to have that extra level of expertise to say, "Well, it's going to cost you this much more to do that" or "this much longer to composite it." And if it can be done, then it can really enhance the creativity of the director to pull off a new idea and make it work.

Rush: I totally agree. On the three *Star Treks* that I work on, we have a rather large visual ef-

fects department. We do 8-10 optical shots of various types every single day. There is no way in the world that I could possibly supervise them. No way. So there is a visual effects supervisor — teams of them — that come down to the set. They keep the director on track for what can be afforded, what can

"This can be a transparent process that improves the entire situation or it can create hell for the people trying to get their vision across."

— Lou Levinson

and can't be done. But within that discussion of the shot, very often the shot is changed or evolved because of the way a scene gets blocked. If you are already into a sequence, you need to maintain continuity. Scenes get re-written after a plan was constructed, which happens on our show every day. So the needs of the scene change and the director's vision of the scene changes, and my input changes. I make recommendations on how best to do the shot — what would tell the story best. So we come to a consensus, often very amicably. The team is very smooth. It's been smooth since the beginning.

I am not against visual effects. They are critical, necessary, needed, vital can't-do-without-them people. It has more to do with the concept of an evolving technology that has a great deal of flexibility. The idea is a two-edged sword: it allows you to fix a mistake, but it also allows you to change something that was never intended to be a certain way. That is my point.

McMurry: Last time I looked at the crew, it was at about 150 people. I think there are a lot of directors who would like to make the entire movie themselves. We shoot 50-60 days. Movies cost \$20-\$50 million. It doesn't get spent by one person. Any successful director has to motivate their crew into their line of thinking of how to create a film. I hear the quote many times, "They don't ever say

"There's no art like show art."

As visual effects people, we are often asked to solve problems on a budget or no budget. So the whole art of filmmaking, from the very first time we have our first preproduction meeting, is one of compromise. It's a compromise of what we can get done in the amount of time with the amount of money and the skills that we have sitting around the table. And as the visual effects supervisor, I'm just part of that formula. I work with anybody from the costume designer, who is insisting that Harrison Ford wear a blue shirt and green pants in front of the blue screen, to the set designer, who wants to make sure it looks like it's 150 feet from here to there, to the photographer, who wants to shoot ASA 100 film at 600 and doesn't want to have any grain in it. It's all a matter of compromise. The successful effects films that get done are the ones with people who realize those issues of compromise, and realize that it takes a group of specialists that are all in there to do the same thing — to satisfy the director's creative wishes to the best of all their abilities and to work together.

Ellenshaw: We rarely admit to compromise because no one at the studio, which is spending \$30 million on a film, thinks they should have to compromise. They want the best, something they have never seen before. It now reflects on the whole filmmaking process. It is not a single man's vision no matter how you cut it. It starts with an idea on the page and gets pulled through, handed off, collaborated, compromised, diced and sliced and it comes out in the end — something different than when it started. How is your cynicism on compromise? What do you think?

Keuhn: Compromise is essential. A lot of times at the beginning, clients will say, "This is how much work we have. This is how much money we have. How do we do it?" We get with the people — the producers, the director — and try to make sure everybody has the same clear vision. You agree on it and sit down to do the digital effects. It starts coming together. Once we start getting it

all together, everyone has forgotten what the initial goal was. "I know what we agreed on, but now we have our foot in the door, we want a lot more for that money." It's very very difficult. When the director hires a visual effects supervisor, it's hopefully someone he gets along with so they are both on the same communication level. And they hopefully hire a facility to do the work that they work well with. Everybody likes the work; then all of a sudden the editor of the movie says he doesn't like it. This happens a lot in the business and you just try to figure the best way to deal with it.



Rush: "Digital," or what we're calling digital, should be taken out of the realm of visual effects. We should look at digital as a concept for something besides visual effects. In other words, a visual effects shot to me is a shot that goes into an existing sequence. It has the characteristics of that existing sequence. It's supposed to fit in smoothly and seamlessly. There is the potential, certainly in today's telecine and in the area of digital manipulation of image, that an entire piece of work or an entire sequence can be radically different than the intended starting point.

The best example is, suppose you shot something with very high-contrast film noir style, and someone made it look like Kodachrome. The digital technology is so capable that it can break something down into ones and zeros and recombine them in any number of ways. This is not about visual effects now. This is about a postproduction facility, that as yet does not exist, which comes out and says, "We can take pork sausage and turn it into vegetable." That's the kind of question I think that this panel relates to. If the role of the cinematographer is changing, that kind of a capability would in fact change what I'm doing. I wouldn't do it. I wouldn't want to be working on a project where my creative capabilities were being altered completely. It would bother me.

Levinson: This can be a transparent process that improves

the entire situation or it can create hell for the people trying to get their vision across. There are cinematographers who, while they're shooting, will think in the back of their minds, "When this shot finally gets to the video version, I'm really going to get to do what I wanted to do all along, which otherwise I would have had to do by totally controlling the lighting all the way across the shot." It's beginning to become part of the repertoire of tools for the cinematographer. To that extent, it's a good thing because it expands their vocabulary.

McMurry: The changing role I think we've given to cinematographers is considerable. I no longer walk around the set with the 70mm camera and say, "Get all these guys out of here, I'm going to do a locked-off shot."

We have briefed the cinematographers who shoot films with us. We shoot with the production camera about 90 percent of the time. No longer are we having to only shoot Vistavision. I go onto a set now with a motion-control system and the director says, "I want to shoot a shot following the person across the room and then I want to split-screen them." I say "No problem." The digital revolution has broadened the capability of the cinematographer and director to shoot things in much the way they would have without ever having to consider that it's going to be a digital effect.

We do have some restrictions that we try to stay with. But I never go to photographers who are shooting an entire movie with 5298 with no light and say, "Well, in this scene, you're going to use 5247 and light it at 500 footcandles because I need a special negative." I don't have to do that anymore. So I think the digital revolution has given photographers the ability to have continuity of their imagery, and we're getting better and better at it. We're realizing we're in an industry, the digital film industry, that's really only two years old. Now none of us look at any shot in a movie and say, "How will we do that on the optical printer?" We just don't do that anymore. There is a tremendous freedom that the cin-

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Rush: I agree that the capabilities of the system have improved greatly in the last several years, and that it's easier to do complicated shots for less money. That's what's happened on our show; we've just spent more money, because the flexibility of the system is greater. There's more good than bad in all of these things. You certainly can't stop technology. I would never begin to propose that we're getting unreasonably treated by the technology, just that it is a two-edged sword. If a person has an artistic title and the work can be altered, this is an issue that relates directly to artists' rights.

Ellenshaw: The question is sometimes asked, "Why care about stock or lighting or good work if digital can change everything?" My impression is that if you take 250-some films that were submitted for Academy consideration last year, the visual effects committee found about 17-20 of those could be considered as having significant visual effects in them — still a small percentage. A person who feels compelled to be a cinematographer still is not going to be influenced much by the fact that his poor lighting may be fixed in post. He or she still is going to be passionate about having created a look with a camera and film and maybe with camera and videotape or whatever medium they want to use, because they are still creating images which in most cases tell a story. So effects are still a small part of it. Don't misunderstand.

We're not destroying images to give you new versions. CGI is not replacing actors. The digital revolution is a matter of a new way of transporting images, of communicating, of being able to manipulate images like we haven't been able to before, and it doesn't mean that suddenly chaos is going to reign. We've got responsible people and irresponsible people in society. There will always be people who are going to take pork sausage and turn it into worse pork sausage. There were people who did bad optical work — there are a lot of crap effects in

films going way back to the beginning. This is not the issue. Do not allow this to consume you with the belief that we have lost our creative freedom. We have not.

Keuhn: As far as asking why we have to learn how to do this, I think it's like asking, "why do I have to learn how to add when I have a calculator?" Because you need to have that understanding, that passion, to understand everything that goes into it. There really are no shortcuts. You have to understand all the processes that are involved. It's just that simple.

Rush: It's always going to be better to do it right the first time than having to fix it in postproduction. You have to consider that the work on the set is not an isolated thing. There are actors performing in that lighting and lighting creates mood, and mood affects the performances of everyone on the set, including the performance of the actors. So when you are given a set and you start turning lights on and creating something that has great depth and beauty, it's going to affect everyone on the set, all the things that happen.

In regard to camera movement: camera movement, placement, size of focal length, and the stock we use creates the amount of depth that you see. All those things are part of the tools that very definitely affect how people feel when they see that final work. The timing or colorization or contrast range are big factors, but they are not the entire thing, they're only parts. ✎

In future issues, AC plans to publish overviews of the second and third seminars of this series, titled "The Art of the Commercial" and "The Role of the Cinematographer in Contemporary Times," respectively. These seminars were co-sponsored by ASC and Eastman Kodak Student Program in conjunction with the Ninth Annual ASC Awards for Outstanding Achievement in Cinematography.

For his Arizona-based commercials, Director Bill Linsman rented Clairmont Camera equipment over 200 times without his crew ever prepping it in L.A.

We routinely prepped it for him and shipped it by air from our place in California to his in Arizona. His crew prepped it again there; and shot with it in Kansas, New Mexico, Michigan, Texas and New York.

“Based in Phoenix, I have been able to make L.A. quality commercials at less than L.A. cost,” says Bill Linsman. “Crew rates are about 25% lower; and I know \$500/day locations in Phoenix that would cost \$2000 in Los Angeles.”

Quality

“However, getting L.A. quality has always meant hiring Hollywood actors and Hollywood DPs—the best. No problem there; Phoenix is a 55 minute flight from Burbank. It has also meant always renting camera equipment from Hollywood.”

Trust

“In the early days, I would ask each DP where he preferred to rent. His preference was something I relied on heavily at first. Air freight costs money. To offset that, it would help if we didn’t have to fly to L.A. and back to prep equipment. I needed a rental house I could trust to prep it for us and to ship everything to Phoenix on time and with no pieces missing.”



Routine

“And I needed that done routinely at least once and usually twice a month. Most of those early DPs told me their first choice was Clairmont. They were Clairmont regulars; fairly soon, we became regulars, too. Now I tell a new DP I’m comfortable with Clairmont and he generally nods his head.”

“Here’s how comfortable: the Clairmonts have sent us prepped

In the U.S.A., Bill Linsman has directed (and in many cases produced) TV commercials for McDonalds, Chevron, General Mills, Oldsmobile, Pepsi, Porsche, Coors, Coca Cola, Honda and American Express, among others. In London: spots for Crest, Pampers, Clearasil, Head & Shoulders and Vicks, among others.

cameras for over 200 jobs and we’ve shot with them both in Phoenix and at locations in six States,” says Mr. Linsman. “One day in Phoenix, I remember, somebody powered up the camera wrongly and shorted it out. This was at the start of the day—about 8AM. A phone call to Clairmont and we had a prepped replacement camera body on our set before 10.30.”

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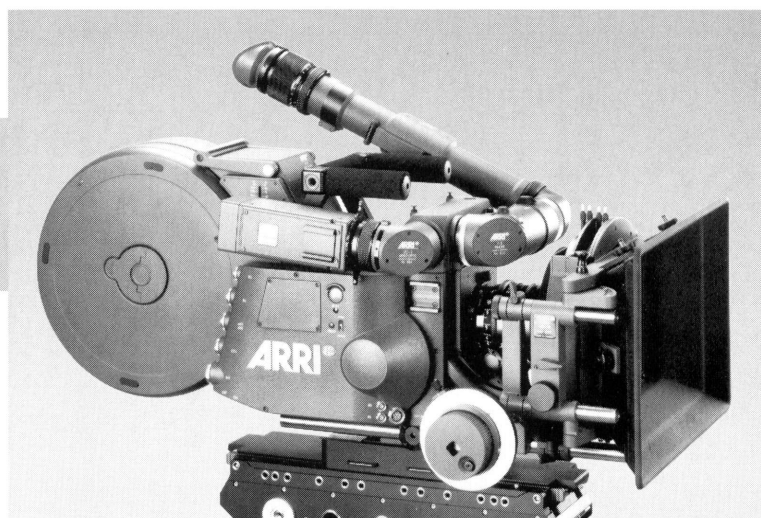
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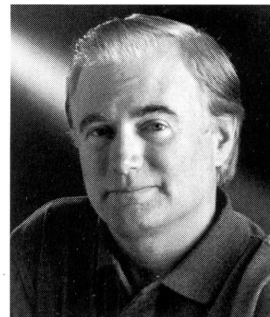
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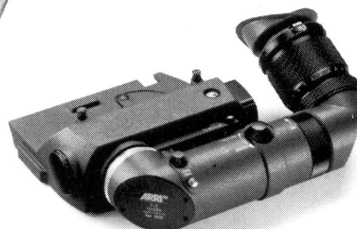
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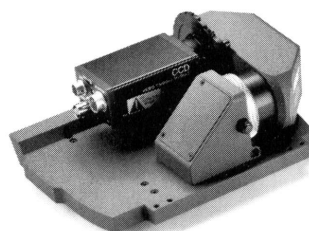


Paul Taylor, demonstrating the Steadicam. Difficult moves are made easier with the ARRI 535B because it is centered directly over the Steadicam post, providing a better balance.



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A sadistic warden (Gary Oldman) oversees the beating of Henri Young (Kevin Bacon) in the bowels of Alcatraz.

PICTURE A FIVE-FOOT-HIGH UNDERGROUND dungeon, six feet in one direction and nine feet in another. Sea water coats the stone walls and mold is growing everywhere. There is no bed, sink or toilet. The human being within is naked, cold and alone in darkness and silence — and this hellhole is his sanctuary. When the metal door clangs open, the real brutality begins. That's when he's beaten and abused by a sadistic associate warden. That's his world for 39 months.

Murder In The First is based on a true story. During the late 1930s, Henri Young was jailed for committing a petty crime. Eventually, by a quirk of fate, he was sent to the infamous Alcatraz, a federal prison on an island in San Francisco Bay. Nicknamed by its inmates "The Rock," Alcatraz was reserved for the worst criminals and publicized as the emblem of J. Edgar Hoover's one-man crusade to rid America of crime.

Young was sent to the prison because there was a quota

to fill. He soon joined an ill-fated attempt at escape and was captured. The scene depicting his return to jail is told in stark black & white images emulating a 1940s newsreel. He is locked in solitary confinement where his treatment is unspeakable. Only hours after he is released into the general prison population, Young kills another prisoner, because he believes the man caused his misery. He is accused of first degree murder, and put on trail for his life. A young public defender is assigned the hopeless



Murder in the First

Probes Humanity's Dark Side

Cinematographer Fred Murphy and director Marc Rocco measure man's inhumanity to man.

by Bob Fisher

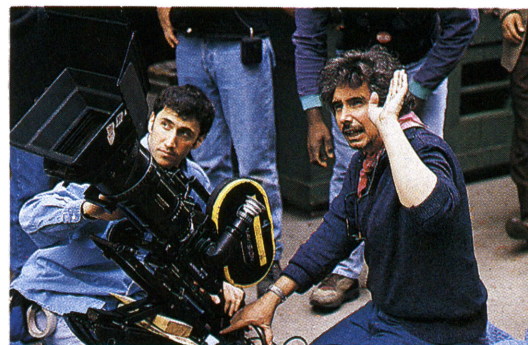
Photos by Anthony Friedkin, courtesy of Warner Bros.

story and the period, and also by the arc of relationships between the main characters: the convict (Kevin Bacon), the lawyer (Christian Slater), and the jailer, Warden Glenn (Gary Oldman).

The final script is based on painstaking research. It wasn't easy, according to Rocco, because many records were destroyed. Months were spent breaking through bureaucratic barriers, but eventually tenacity paid off and the remaining files were made available. Rocco, cinematographer Fred Murphy and production designer Kurt Petrucci scouted Alcatraz many times in preparation for shooting. They designed a set replicating the original dungeon in painstaking detail. Two weeks of photography was done on Alcatraz Island in a factory-like steel and stone environment. The courtroom and jail scenes were filmed on sets. Various locations were used in Los Angeles and San Francisco.

Murphy is a native New Yorker who studied architecture

at the Rhode Island School of Design. He started his filmmaking career working as an electrician on commercial crews. On weekends, Murphy shot no-budget documentaries, initially with friends. Between 1976 and 1978, Murphy photographed four experimental fiction films in 16mm format. *Heartland*, his first 35mm



feature, came in 1979, and subsequently Murphy has compiled an impressive and growing body of work. His credits include *Jack the Bear*, *Scenes From a Mall*, *Hoosiers*, *The Trip to Bountiful*, *The Dead*, *Five Corners*, *Eddie and the Cruisers*

Fred Murphy signals "camera ready" as first assistant Tony Wolberg casts a critical eye toward the subject.

task of defending him. The emotional thread which weaves through the fabric of the film is defined when Young says he would rather die than return to Alcatraz.

Eight years before the film was made, the writer accidentally came across a newspaper account of the actual trial, and penned the first version of the script. The story was finally brought to the screen by 30-year-old director Marc Rocco, son of character actor Alex Rocco. Rocco says he was fascinated by the

Right: *The warden establishes his power over Young early on, beginning the process of breaking him down.* Below right: *At his nadir, Young clings to the shreds of his sanity by scratching a baseball diamond in the floor of his cell and imagining games.*



and *Enemies, A Love Story*.

Rocco was introduced to Murphy through his films, and he liked what he saw. Like Rocco, Murphy was impressed with Dan Gordon's script. More importantly, there was an instant simpatico between them. Rocco told Murphy that he basically wanted "a black & white film shot in color."

Murder In The First has three basic settings: the dungeon, the courtroom, and a city jail in San Francisco where Young is held during the trial. Some of the most carefully planned scenes occurred in the jail, where the goal was to keep the audience engaged through 30 minutes of dialogue in a gray cell. Camera movement played an important part. There were some complicated camera rigs and elaborate crane shots using a cam-remote and a Swiss Jib. The camera would go over the top of the set and come down into the cell.

"We did it with relative ease just like an ordinary dolly shot," Murphy recounts. "We used the Swiss Jib nearly every day, and difficult shots became second nature. We did a fair amount of cross-fading using a dimmer, my front light becoming my back light as I tracked around."

In the dungeon sequences, Rocco and Murphy agreed that it was mandatory to



confront the audience with the brutality that brought Young to such a state of mind. There are vividly brutal scenes which aren't easy to watch, but they are a necessary part of the setting. A few sequences are so horrifying that Rocco and Murphy knew that some people in the audience would turn away from the screen. In one 40-second sequence, Henri is naked and chained like an animal in the darkness of his dungeon. The door opens in a blinding flash of light which silhouettes actor Kevin Bacon.

"It's a beautiful image in the most horrifying circumstances," Murphy says. "Simplicity makes it work. The dungeon door opens. The light is blinding.

Water comes splashing down on Henri. During those few seconds we rotated the camera on its side."

Murphy is no stranger to filmic brutality. One is reminded of the disturbing, slightly surrealistic scenes in Tony Bill's *Five Corners* wherein a penguin is beaten to death in a Brooklyn park. Jodie Foster stars as a young woman who tries to get help from a tough-guy-turned pacifist (Tim Robbins) when an unhinged admirer (John Turturro) is released from prison. The dark, bizarre suspense of the picture is vividly enhanced by Murphy's

moody photography.

Murder in the First, however, is determinedly realistic throughout. "I think at certain times if the images are beautiful and contrast with what is going on, they are more powerful and make a stronger statement," says Rocco. Murphy agrees. "You see Henri deteriorating in his dungeon," he says, "but then we cut away to kids running to school on the island. There are gorgeous flowers blooming within sight of the prison walls."

While Murphy and Rocco weren't afraid to improvise at the moment of photography, every detail was planned and choreographed. That takes teamwork. "I only operated a camera for another cinematogra-

pher on one film," says Murphy. "I went to Portugal with Henri Alekan, the great French cinematographer, and Wim Wenders to shoot *Der Stand der Dinge*. Henri was very patient with the actors. But there was one scene where we needed a reflection of an actor in a glass window. The actor had to hit his mark precisely. Henri very politely told him that he'd missed. The guy started complaining, and Henri said, 'If you want to act, get a job in the Comedie Francais. This is cinema, and we have to work together.'"

His point was that no one makes a movie alone. *Murder In The First* had a grueling 13-week shooting schedule that demanded stamina. The cast and crew were shooting six days a week. A major earthquake shook the area in the middle of production, and the schedule was turned upside-down. The crew did two weeks of work on Alcatraz, which was also no walk in the park. It was dirty, cold and



were almost always shooting in confined areas," Murphy says. "There is a feeling of claustrophobia. Until the last scene, Henri is always seen as a prisoner. He is surrounded and enclosed. Even in the courtroom, there are railings in the foreground in scenes that make it seem like he is in a cage. 'It's a constant visual reminder that he is trapped,' says Murphy.

Murphy used a Panaflex Platinum camera, mainly with Primo lenses, and the 500-speed Eastman EXR 5296 film on interiors. If he was shooting the same movie today, he says he would choose the newer 5298 film. On exterior scenes, he used the 200-speed Eastman 5293 film. He shot the simulated newsreels with Eastman Double X film.

Rocco and Murphy concentrated on perspective in their directing decisions. The perspective of the audience shifts with the storyline. Occasionally, the camera thrusts them into the middle of scenes as invisible participants. Mainly, they are spectators.

Murphy rarely went wider than a 50mm lens, and mainly when it was the only way

Above, left and below: After murdering a man in prison, Young is assigned a greenhorn lawyer (Christian Slater) for his defense. Their initial encounters take place in a holding cell in a San Francisco jail. Murphy and Rocco used movement — including Steadicam work by Kirk Gardner, below — and dramatic lighting and composition to maintain tension through the long dialogue scenes.



dark. The production team even had to bring its own water.

One of the easier deci-

sions was to confine this story within the Academy standard aperture 1.85:1 aspect ratio. "We

Murphy's background in architecture sometimes reveals itself in his photography. Here a crane shot in the Bradbury Building in Los Angeles renders a sense of place as the crane descends the stairs with Slater and his character's older brother, who is attempting to dissuade him from defending Young.



to cover a set. He chose a 75mm lens much of the time, and most close-ups were filmed with either a 150mm or 180mm lens. "Longer lenses allow you to draw the audience more intimately into the scene even if you are shooting through bars," he explains. "If you are shooting with a wider-angle lens, there is more foreground."

One exception was the scene in which Henri kills another prisoner by plunging a spoon into his throat. Murphy, using a single blinding source of light and a handheld camera, exposed the images at 48 frames a second. At the end of the sequence, the camera is again on its side.

For the scene, which was one of the few shot handheld, Murphy used a 21mm lens to visually punctuate the feeling of disorientation. He also used the 21mm lens on some of the longer Steadicam shots when Rocco wanted to show the audience more of the setting.

The audience meets Slater ten seconds after the murder

scene, as he chases a cable car coming over the crest of a hill. The sequence is a visual metaphor for the situation facing the promising Ivy League graduate. Powerful political interests, including his own brother, don't want him to make waves.

"When the lawyer first meets Henri, we follow him walking through the narrow corridors of the prison," says Murphy. "There are a couple of 270- and 360-degree turns which were accomplished with the Steadicam. The audience is experiencing the jail through his eyes; when Christian comes to Kevin's cell, it's like he's watching an animal in a cage."

Petrucelli says, "Fred shoots over, through and under things. He wants the audience to see every brick and bar. You can't do it all with just a hothead crane. He shot this set from every imaginable angle using a Steadicam, a dolly and a crane. We designed the set so it could be pulled apart."

For the courtroom sequences, Rocco and Murphy researched trial scenes in other

films, and decided that traditional coverage and lighting would be too static. There are long tension-building scenes in the courtroom, including one lasting ten minutes, another eight, and a third for six minutes. In the earliest courtroom scenes, Slater's character is insecure and overmatched. The camera movement is frenetic. It includes a four-minute Steadicam shot tracking Slater around the courtroom. As the lawyer delves into the heart of the case, and forms a friendship with Young, he becomes more confident. By the last courtroom scene, he is stalking the associate warden like a hungry lion circling his prey.

"We built the courtroom set so it was conducive to camera movement," says Murphy. For five minutes near the end of the trial, it's just the two of them. The camera movement becomes ponderously slow. It comes in on a very tight two-shot, just Slater and Oldman. The camera is motionless for two long minutes while the lawyer devours his prey. He can't save Young's life.

TIM SUHRSTEDT ON FILM

"I'll always remember George Folsey teaching at A.F.I. and showing us how to use black and white film to create depth and tonality by alternating light and darkness. It opened a whole new world. I'm happiest with the films I've taken the most chances on. Maybe it's an edgy look, because there's not enough light, or there is too much light in one part of a scene and not enough in another. Maybe the mixture of color temperatures is interesting. Sometimes it's an angle of light or something about the texture or the location. But there's some magic there, and it usually happens at the moment of photography. You see an actress turn her head a certain way and realize that if you move a light a few inches, it's going to work better. It's a tactile feeling. Sometimes an invisible amount of light filling a side of a face or a corner of a room makes a big difference."

Tim Suhrstedt

Tim Suhrstedt's credits include *Getting Even With Dad*, *Mystic Pizza*, *Noises Off*, *The Favor*, *Bill & Ted's Excellent Adventure*, and commercials. He is currently director of photography on *Chicago Hope*.



**The Filmmaker's
Film Maker**



The courtroom set was designed to facilitate movement and lighting, and the scenes show it. Eventually they culminate in a carefully choreographed showdown between Slater and Oldman.

But he can save his soul.

"We were mainly shooting on bleak sets, but there can be a beauty to that," Murphy continues. "There is contrast between light and darkness. One side of Henri's face reflects light and the other is in shadows."

Not all movement was confined to interior jail and courtroom scenes. One remote shot featured the camera tracking from the business end of a jib arm on a crane outside of San Francisco City Hall. The crew built a 50-foot-long parallel which was around 20 feet high. The shot begins at street level as Young is being led out of the building in shackles. As he walks down the steps, the camera pulls up and back until there is a 50-foot-high view of him surrounded by 200 people, including reporters and cops swarming around as he makes his way to a police van.

Murphy used hard light and Supra frost filters to create a

slightly grainy and diffused look to visually define the period. Mainly, however, the costumes, set dressings, cars and the choice of colors identified the era for the audience.

"Everything was brown, gray and black," he explains. "There weren't a lot of colors used in those days. The fedora hats were distinctive and so were overcoats. Who wears overcoats today? Woman also were more likely to wear hats in those days."

Murphy worked around the hatbrim problem by using backlight, and putting a little light on faces below the brim level so you can see people's eyes. "I liked the hats," he says. "The brims made great shadows on the actors' faces. It made people look more interesting. As they moved through the streets, especially on Steadicam shots, interesting things happened."

Murphy says that Rocco had a keen intellectual grasp of

what to do with the camera. "We weren't simply following the actors. There was a reason for every move." Rocco's directing style reveals a command of the classical Hollywood cinema, but he draws an interesting comparison to 1940s films: "As wonderful as those old movies were, they were usually simple," he says. "There was a two-shot and a couple of singles. Today, you take 16 shots to do the same thing. Old movies were like plays. Today's audience expect a more kinetic experience."

Murphy describes the composition in *Murder In The First* as "edgy." He explains that while the framing is sometimes slightly off-balance in terms of where the actors are, it is never frivolous. "I'm not being artsy," he insists. "We used composition, movement and light to express ideas in different ways. You have to trust your instincts."

Instinct was Murphy's ally for the scenes that reveal the

Congratulations

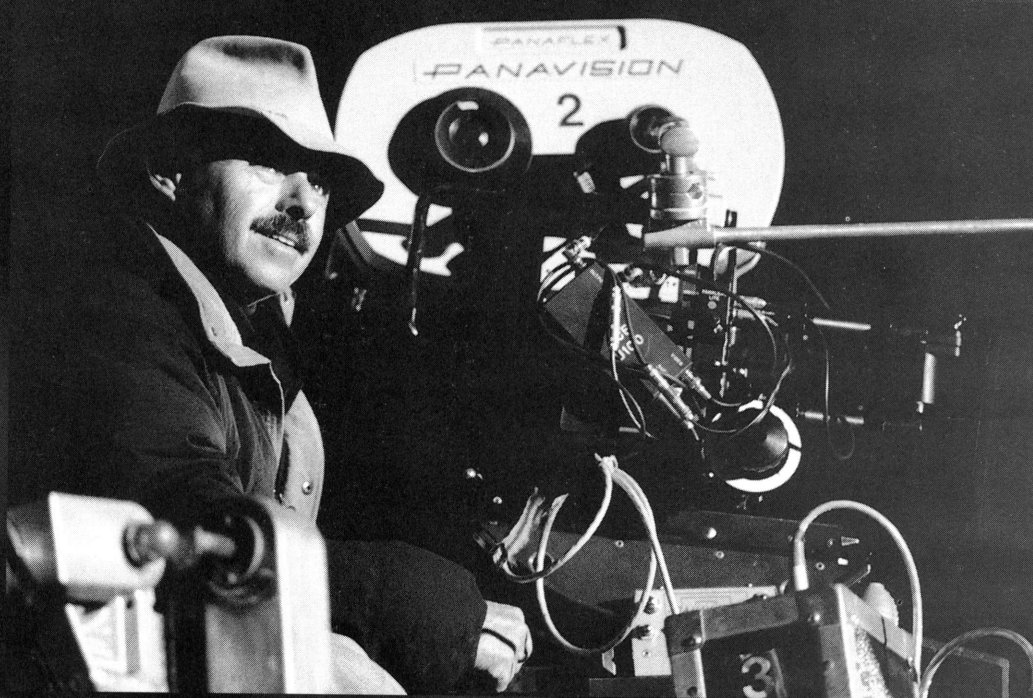


Photo courtesy of Columbia TriStar

JOHN TOLL

on winning the Oscar® for Best Cinematography with "Legends of the Fall".

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Above: *The lawyer (Slater, right) and his charge (Bacon) form a tenuous bond that is tested in the courtroom. Right: Gary Oldman as the warden takes the witness stand, supremely smug in his demeanor. As his cherished beliefs about criminals are assaulted, the compositions lose their confidence and dignity.*

dungeon. Since Henri spend 39 months in darkness, lighting his surroundings was difficult, to say the least. A pivotal scene has Slater's character cajoling his way into seeing the dungeon. He walks down the steps and through the Civil War-era catacombs below the prison. He peers inside the pitch-black dungeon, then steps inside and flicks on a cigarette lighter. The flame barely penetrates the darkness, but it is sufficient to reveal his face. He sees where Henri has scratched markings into the ground with his bare fingers.

Murphy lit that scene with gas light coming from a piece of pipe attached to a propane tank. Other sequences filmed in the dungeon were illuminated with small pieces of edge light, combined with a little fill light that barely allows the audience to see a few details in the blackness. Murphy used projected hard light to create harder shadows. He explains that hard light tends to make colors seem more alive.

"There is little light flying around loose," he explains, "and the colors simply die and disappear. I also used a blue gel to take some of the color out. The




reds tend to go brown. It depends on your printer lights, of course, but if your front light is blue, and you underexpose by a stop or so, you are going to get a monotone look, especially when the actors are wearing grays and blacks. I also used a warm backlight."

Murphy notes that Bacon projects a likable personality, and that the audience can empathize with him. There are a few moments of a flashback to Henri's childhood, but the audience mainly gets to know him from the stories he tells. He hungers

for any form of human contact; it is more important to him than his life, on which he places little value. "It's one of the best performances I've seen," says Murphy. "He hides a lot in the shadows. Then, he'll turn his head, and we'll capture just a glint of light in one eye."

Murphy was impressed with the fact that Rocco wasn't reluctant to bend the rules. For example, there are times when the camera unexpectedly dollies away in mid-scene and goes to another scene. "It leaves the audience wondering what happened in the rest of the scene," Rocco explains. "It's not cutting away. It's more like editing with the camera." For some scenes, Murphy created quick fades in the camera by panning to black. In the last shot of the movie, the camera follows Bacon walking down the stairs at Alcatraz to his dungeon. He walks into blackness, and the shot looks like a great optical fade.

"Sometimes the tiny little shots work best," says Murphy. "There's a little scene filmed on the boat taking Henri back to Alcatraz. He has won the case, but he has to go back to finish his old sentence. He knows his tormentors are waiting. We see his face in profile for just a few seconds, and it tells you that he has chosen dignity over fear."

According to Rocco, communications with Murphy were very straightforward throughout the picture, which led to a fulfilling experience. "I try to be as clear as possible when I'm talking with a cinematographer," he says. "You have to be direct about your ideas. That sounds banal, but you've got to try. Sometimes you just have the edge of a good idea, but you can't get your arms around it. You need someone to fill in the missing parts of the puzzle." 

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*The staff of Panavision would like to thank the Academy
and the members of the Scientific and Technical Awards Committee for this recognition.*



Critically acclaimed across the country, *Federal Hill*, writer/director Michael Corrente's debut feature, has shown that it's possible to excel with a budget of under a million dollars — more specifically, under a tenth of a million. "Even though we only spent \$75,000 to shoot the movie, I never felt that had to be a limiting factor in how it turned out," says director of photography/associate producer Richard Crudo. "It's a simple story, simply told. Sure, we couldn't afford a Louma Crane, but in this case all the toys would only have gotten in the way of the performances. You just tell yourself it's a challenge and try to keep rising to it each day. I'd be lying if I said it wasn't a grueling shoot, but all things considered, making this film was a very gratifying experience."

(In addition to the challenges of the shoot itself, the filmmakers endured a well-publicized colorization controversy which is detailed in a sidebar beginning on page 50.)

Showcasing 38 locations and 42 speaking roles in a tightly paced, lushly photographed package, *Federal Hill* destroys forever the myth that the terms "low budget" and "black & white" are synonymous with "poor production value." Crudo emphasizes the planning that preceded the starter's gun. "Obviously we were up against it in the money

department; time was tight, too, and the fact that this was Michael's first film was another curveball in the mix. He and I are real movie fanatics — we see everything, especially the micro-budget independent films that have made a big splash in recent years. While we both have great respect for anyone who manages to get a movie made — and some of them are our friends — we always felt that most of these [low-budget] projects had a chintzy, student-filmish look and feel to

Hill's effectiveness in this regard to a common-sense approach. "Most low-budget people make their biggest mistakes when they ignore the basics of film grammar or try to do more than their money realistically allows. It usually shows in the simple stuff like crossing up eyelines, but you also see a lot of things like lashing the camera to a loose tree branch and calling it a Steadicam. Films always end up looking sloppy and amateurish [when you do them] that way. I mean, isn't it better to

Filmmakers Plant Flag Atop *Federal Hill*

Independent collaborators triumph over low budget and colorization controversy to create striking black & white drama.

by Marisa Polvino

them. We decided that the only way to avoid this on our picture was to do all we could in preproduction to eliminate anything that signaled cheap, pretentious or heavy-handed."

Crudo attributes *Federal*

shoot the scene cleanly in a more conventional manner? I'm not saying you shouldn't be ambitious, because we in fact were. But it would've been stupid for us to do 'Jurassic Park, New England Style,' so we always kept professionalism and practicality in mind."

The actual prep work began in January of 1993 and intensified until shooting started in June. While Corrente rehearsed the actors for six weeks prior to opening day, Crudo scouted locations and set up a visual blueprint that the production's resources could handle. "To make it concrete for Michael," he recounted, "I included some rough storyboards and shotlists, and more importantly, several alternate plans for lighting and covering each scene. That way, we could still do justice to the script even if everything went bust on

Assistant cameraman David Paone (left) and director of photography Richard Crudo man the scaffolding.



Photo by David Paone



The boys enjoy a noirish night on the town. The gang includes (from left) Bobby (Jason Andrews), Frank (Michael Raynor), Joey (Robert Turano), Ralph (Nicholas Turturro) and Nicky (Anthony DeSaudo).

the day we shot it — as it often did.”

With each element in place, Crudo didn't consider the shoot particularly strenuous. “We filmed for 18 days and never went past 12 hours, which is a lot more than most productions can claim. Our crew did a great job; the efficiency level was pretty high. I've had lots of experience on sets with some of the best people in the world, and I was always amazed at how many hours and resources were wasted as a matter of routine. I don't think it hurt us that we didn't carry any extra gadgets or have the luxury of letting the actors discover the magic of their performance on the set. To the contrary, the constraints we worked under blessed us with an immediacy of emotion that's a big part of the movie's success. And the heavy rehearsal and preproduction work we did helped us clinch the first shot of the day a half hour after call time instead of an hour after lunch.”

In addition to the ob-

stacles familiar to filmmakers regardless of budget, *Federal Hill* presented a uniquely formidable challenge at the start. Director Corrente notes, “I've lived in New York for 12 years but I grew up just a few blocks from where we shot the bulk of the movie, on Federal Hill, which is the Italian section of Providence, Rhode Island. So for me it was like a homecoming. A lot of the local people didn't feel that way, though. They were concerned about how I was going to treat them in the story. I had to do some careful reassuring every so often and that was really stressful at times. Plus, I raised all the money myself through a limited partnership. We started production with only \$40,000 in the bank and promises of more from various people. Needless to say, a lot of those promises turned out to be empty when the time came to invest, so I found myself running to the phone between setups with desperate pleas for more cash. By the grace of God and some good friends — a few thousand here, a

few more there — it all came together and I was able to keep the ship afloat. And the locals ended up loving the movie, to boot.”

Close supporters might not mind a pledge to be paid back sometime in the ethereal “future,” but those in business often can't afford to be quite so understanding. Crudo was surprised at the generosity he found in the industry. “Our suppliers — Panavision New York, Eastman Kodak and DuArt Film Lab chief among them — were very helpful in granting us a manageable deferment schedule. The Screen Actors Guild was also unexpectedly agreeable in their dealings with us.”

“Since I also line-produced, I never slept more than three hours a night through the whole thing,” Corrente recalled. “I tell you, it was insane. Every time I wanted to just give up and cry, I'd look at my wife Libby [Langdon, the film's female lead and also an associate producer] and she'd remind me that what we were trying to do was impos-

In the familiar
ambience of a
local nightclub,
the *Federal Hill*
friends share a
laugh, not
realizing that
their lives are
about to
disintegrate.



Photo by David Paone

sible: make a quality feature with the money the studios spend on copies of a script they're thinking about making."

Federal Hill's shooting script grew from a semi-autobiographical play called "Ledge Street" that Corrente wrote and produced in the early 1980s. Both tales chronicle a slice from the life of five young Italian-American men, lifelong friends, as they knock around Corrente's old haunts. No longer juvenile delinquents but not sharp enough to run with the real wise guys, the group exists on the fringe of the underworld, selling drugs, stealing and generally small-timing their way through desperate and sometimes violent lives. With the law close on one side and the mob closer on the other, it seems the only promise their future holds is some sort of messy showdown.

Largely ignorant of life beyond "the Hill," as they call it, the guys carry on in their swaggering manner as if they are indestructible. Ralph (Nicholas Turturro of *NYPD Blue*) is the unpredictable one, crazy at turns yet fiercely loving to his manic-depressive father. Frank (Michael Raynor) is the son of the local mob boss, unambitious while waiting for the torch to be passed. Joey (Robert Turano) is the one who should know better but who uses the gang as an escape from

his more traditionally-minded wife. Bobby (Jason Andrews) is the baby of the bunch, whose reckless behavior stems from what he needs to prove to the others. Only the handsome Nicky (Anthony DeSando) has any aspirations beyond the next score. Ironically, it is this yearning, realized in the form of an unexpectedly tender temptation, that ultimately leads to the group's unraveling.

Just a few short blocks across town — but, in essence, a world away from Federal Hill — sits one of the jewels in the Ivy League's crown, Brown University. When Nicky falls for Wendy (Libby Langdon), a WASP-y coed with a fabulous future, Ralph senses a breach in the emotional bonds of the gang. Repercussions run deep. While trying to undermine his pal's new relationship, Ralph runs afoul of the local crime don (Frank Vincent) and endangers the lives of everyone involved. The twisted love that motivates Ralph is in truth an irresponsible selfishness. Eventually it leads to tragedy.

Many reviewers have stamped *Federal Hill* as "a *Mean Streets* for the '90s" and praised Corrente's foray onto Martin Scorsese's turf. Donning his director of photography hat, Crudo takes issue. "Of course it's a natural comparison, with the young Italian guys running around and

all, but to me that's a rush to judgment based on the surface elements only. And oddly enough, we took our visual cues from an entirely different film: *In Cold Blood*."

Richard Brooks' stark black & white treatment of Truman Capote's chilling tale about murder in the American heartland earned Conrad Hall, ASC an Academy Award nomination for best cinematography in 1967. But Crudo is quick to add that the makers of *Federal Hill* were not simply trying to create a feature-length homage. "By 'visual cues,' I don't mean that we actually set out to copy *In Cold Blood*; we merely used it as a reference in terms of overall texture — clean, sharp, deep. It's almost 30 years later and that film still holds up as a textbook example of outstanding motion picture photography."

The decision to shoot *Federal Hill* in black & white was a relatively easy one. Crudo remembers, "Michael and I played with the idea from the start, but whenever we mentioned it we got a bad response, especially from potential investors. This caused us to waffle a bit, but ultimately Michael called me at six o'clock one bright Saturday morning and popped the question: yes or no? Even in my grogginess there could be only one choice.

"After all," he explains, "these characters live in a world where there's no middle ground. They literally think in black & white, so we figured that would be the best medium to tell their story in. Plus, Michael and I knew a well-mounted black & white feature would set us apart from the pack. It certainly wasn't a budgetary choice, as we've been accused of once or twice; as a matter of fact, color's cheaper in the long run. Mostly it was a challenge to do it this way, and do it in a form that didn't club you over the head."

Shooting in black & white freed Crudo from some of

the problems associated with color work, but brought in a whole new set of concerns. "Technically, the challenges of both mediums are equal, though quite different," he says. "Maybe I didn't have to worry about color temperature too much, but I did have to watch other things very carefully. The creation of depth and the separation of planes in *Federal Hill* were much more dependent on tone and subtle shadings than if we had shot in color. I love color, but I'm also attracted to the abstract qualities of black & white. Everyone can agree on what fresh new grass or a clear noonday sky looks like. See the same things represented in gray tones and your interpretation becomes much more personal. Hopefully that draws you into the story."

Crudo continues, "The funny thing is that all the people who told us black & white was a lousy idea are the very ones who are gushing over it now. The movie's played all over the country and we've held screenings for thousands of average filmgoers and I've yet to hear one vote against it. It's really frustrating, but the mainstream industry's resistance to producing black & white features is just nonsense. Audiences love it."

In keeping with his commitment to delivering Corrente the highest-quality presentation, Crudo didn't even consider originating on Super 16mm. "Lots of low-budget people swear by it, and God bless 'em, but I defy anyone to show me a theatrical blow-up to 35 that can hold its own against a 35 original. It can't be done. Plus, when we doped out the costs, we found we could support 35 as long as we didn't go overboard in our shooting ratio, which was determined during our preproduction planning. As if Michael needed any convincing, I dragged him to the lab to show him a side-by-side test. He agreed. Super 16 indeed has its place — on somebody else's movie."

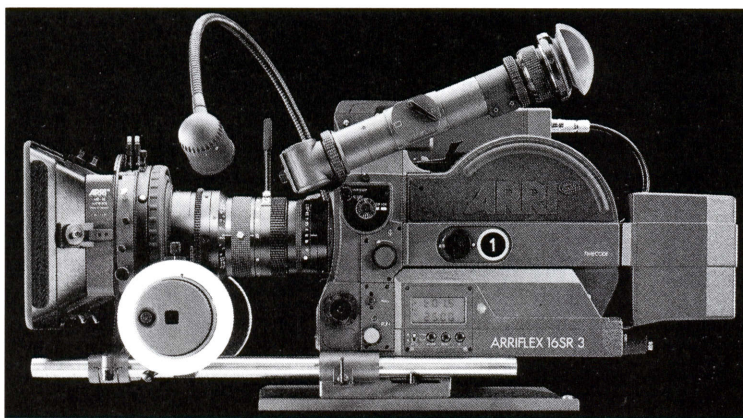


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Federal Hill's Creators Endure Colorization Clash

Writer/director Michael Corrente and cinematographer Richard Crudo battle to maintain the integrity of their film — and their reputations.

by Stephen Pizzello

"...the film's glossy black & white photography and small-city location shooting suggest the Phil Karlson crime exposés of the early Sixties." — J. Hoberman, The Village Voice

"...Federal Hill often has a shadowy, film noir-ish look... its mood is early Martin Scorsese." — Michael Janusonis, The Providence Journal-Bulletin

"...cinematographer Richard Crudo's black & white images have the clarity of ebony and pearls." — Thelma Adams, The New York Post

"We felt we could broaden the audience if we colorized [Federal Hill.] After we [screened] it in New York, Boston and other cities, the reaction we got back from those markets is that they would enjoy it more if it wasn't in black & white." — David Bowers, spokesman for Trimark Pictures, in a February 18 interview with the Los Angeles Times

It was a filmmaker's worst nightmare come true.

Having labored to lend *Federal Hill* a moody black & white ambience, director Michael Corrente and cinematographer Richard Crudo received an unpleasant jolt on February 15, just weeks before the film's Los Angeles opening, when Trimark Pictures announced its intention to

colorize the picture for theatrical release, home video and TV broadcasts.

While Corrente had earlier agreed to consider a colorized home video version for selected markets, he had never conceived that the company might try to colorize the theatrical version. When he heard the news, his reaction was swift and unvarnished. "Over my dead body will they colorize my film," he declared in an interview with *The Hollywood Reporter*. Crudo, in a state of shock, added, "This is tearing my guts out. We shot the film in black & white for a reason. It was a conscious artistic choice."

Convinced that a color version would attract viewers reluctant to sit through a black & white movie, Trimark failed to anticipate the collective ire of the Hollywood community, which rallied behind Crudo and Corrente. Arthur Hiller, president of the Academy of Motion Picture Arts and Sciences and founding chair of the Artists Rights Foundation, called the proposed colorization "an insult to the filmmakers."

Soon after, the Artists Rights Foundation itself joined the fray after being approached by Crudo and Corrente. "We asked Michael if he was the copyright holder,

Continued on page 51

The production used one stock only: Eastman Kodak Double-X Negative 5222. Crudo rated the film at EI 160 under tungsten 10 lamps and at EI 200 in daylight. Don Donigi and Steve Blakely at DuArt Film Lab in New York City did the processing, developing the negative to a .60 gamma. "I shot a pretty comprehensive series of tests and found that the combination of a half-stop overexposure and about a half-stop underdevelopment gave me the look I liked best — rich, inky blacks and highlights that held up well under some pretty extreme conditions," Crudo states. "The 5222 is virtually grainless except for several instances of bad opticals where the contrast shifts some, but a sloppy technician is to blame for that, not Kodak."

He adds, "I also established a printer light of 25, which by pure coincidence sits right in the middle of the scale. DuArt doesn't develop and print black & white on a daily basis, so over a few days our footage count would tend to build up. With one set printer light, the Hazeltine operator just punches it in and lets it go. I use this method all the time, for color as well. It staves off any potential atrocities by the lab and lets me see exactly where I stand when I look at dailies. Further testing showed Agfa 561 to be the best positive stock. Its higher silver content gave a richer feel than on any of the other print stocks."

Federal Hill's camera package, though top-shelf, was as stripped-down as the director's approach to making the movie. The equipment included a Panavision Golden Panaflex, Primo T1.9 lenses (17.5mm, 27mm, 40mm and 75mm and a Panavision T3 5:1 zoom), four 1,000-foot magazines, a Panahead and a standard complement of accessories. "What else do you need?" quipped Crudo. "My old pals Scott Fleischer, Sal Giarratano and Chris Bieler at Panavision

Continued from page 50

which in fact he was," says Artists Rights Executive Director Keith LaQua. "He was the director, writer and producer, and he had retained the copyright and then sold the film to Trimark so they could distribute it. We sent a copy of the contract to our counsel in Washington, D.C. After examining the contract, we found out that it included language that would protect Michael and his artistic vision. That put Michael in a very strong position."

As a result of this finding and the public outcry, Trimark backed off its plan, announcing instead that it would prepare a colorized version of the film for home video only — and that this version would be packaged with a black & white version to allow renters a choice. [AC attempted to contact Trimark representatives several times for this article, but the calls were not returned.]

The filmmakers' angst was far from over, however. Shortly after beginning work on the colorization, CST Entertainment, the Culver City, CA-based company hired to do the work, ran an ad in the trades which sent the filmmakers ballistic. The ad read: "As the provider of the digital technology used to colorize *Federal Hill*, we applaud director and writer Michael Corrente, cinematographer Richard Crudo and Trimark Pictures in their decision to colorize the home video and television versions. . . . Speak with some of the successful artists who recently discovered CST's digital color and ask what it did for them." The ad went on to list the names of Woody Allen, John Sacret Young, Tony Kaye and the rock band Green Day.

As Corrente and Crudo fumed, the normally

reticent Allen blasted CST in print, telling *The Hollywood Reporter*, "They [CST] put an ad in the paper that led with my name, with the implication that one, I condone the process, and two, I condone their use of it in the *Federal Hill* situation. I stand firmly opposite to them. They made it seem in the ad that I tacitly endorse their position, whereas I think they're completely wrong. I have always felt strongly on the position of colorization. Without complete consent of the artist involved, it should not be done."

Allen pointed out that there was "a huge difference" between the colorization of *Federal Hill* and his use of the process for a seven-second piece of newsreel at the beginning of his film *Bullets Over Broadway*. "We bought a few seconds of newsreel footage and colored it so it would be consistent with my movie," the director told the *Reporter*. "We bought the clip and everything was done with everyone's knowledge."

Enraged at the ad's implication that they had enthusiastically pursued colorization, Corrente and Crudo considered cancelling their contract with CST, but later backed off the plan after smoothing things out with CST's president and chief executive officer, Jonathan Shapiro. Says Crudo, "I met Shapiro when I was doing some tests at CST, and he's a pleasant guy. I understand where he's coming from. He's a businessman taking people's business. I don't begrudge him that, I just object to him dragging my name into it."

For his part, Shapiro offers, "Michael and Richard are working as consultants on the film in terms of the choosing of the colors. That should

have been the correct statement [in the ad,] and I apologized to them. It all started off between Trimark and them as a misunderstanding. I didn't wake up one morning and say, 'Gee, here's an \$80,000 black & white film, let me call Trimark to see if they're willing to spend \$250,000 to colorize it. [Trimark] contacted us.'"

With the imbroglio in their rearview mirror, Corrente and Crudo recently took time out to reflect upon their experience. Corrente opined, "The upshot is that I think [Trimark] might think twice before doing this again in the future. I certainly hope that the artists' rights will be more clearly examined in the future."

Added Crudo, "The colorization process is very labor-intensive, and it costs something like \$3,000 per minute. CST's technicians pull a couple of representative stills from each scene, and they colorize those stills. When they're done, we go back and check out the work and they make a bunch of changes while we're standing there. I'm doing my best to keep the look as true to our original intent as possible in the realm of colorization. I honestly don't think that colorizing the film is going to make Trimark any profit. The whole thing is like putting wheels on skis, and it's heart-breaking to watch it happen. Unfortunately, I think colorization and manipulation is just going to get more pervasive as time goes on."

The duo are undaunted, however. Their next project together will be a film version of David Mamet's *American Buffalo*, and they are seriously considering shooting it in — yes, that's right — black & white.

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New York really bent over backwards to help us out. They're great guys and I'm really indebted to them."

Crudo became close with the staff at Panavision during his career as an assistant cameraman, when he served on the crew of such features as *Broadway Danny Rose*, *The Purple Rose of Cairo*, *The Money Pit*, *Ishtar*, *Raising Arizona*, *Field of Dreams*, *Ghostbusters II*, *The Silence of the Lambs* and *Presumed Innocent*. After a brief stint as a camera operator, he made the jump to director of photography in 1990, lighting many no-budget affairs. "My goal always was to become a cinematographer and I was very fortunate to work as an AC for some of the best ones around: Gordon Willis, ASC, Vittorio Storaro, ASC, Michael Chapman. Basically I just did my job, kept my mouth shut and paid very close attention to what they were doing all the time. It was the best training you could possibly ask for." Crudo's other feature credits as a director of photography include *Title Shot*, *Rave Review*, *Tilt-A-Whirl* and *The Low Life*.

Federal Hill handily displays its local ethnic flavor, shooting entirely on the streets and in practical locations throughout Providence. Photographically, some of the settings presented Crudo with a number of problems. "The good part was that I didn't have to listen to the grips complain about lugging the dolly to the top of a five-floor walk-up — we didn't have a dolly to begin with! But that was just as well; it wouldn't have fit inside the apartments we used. Just placing and hiding lights was a real challenge with the cramped spaces and low ceilings. I wanted to retain some modeling and texture with the light; I didn't want to just bounce a unit into the ceiling and fill the whole place up with something featureless, so the position of each lamp was critical. On top of that, hitting marks was kind of an arcane notion for some of our actors, and

when you're stuck like this, the difference of a foot or two can mean a stop or two of exposure one way or the other. Variacs or dimmers would have helped, but naturally they were off having dinner somewhere with our dolly, so again I went back to my blueprint from early on. When 'Plan A' didn't work out, 'Plan B' or 'C' went right into effect, whether that meant floating nets or cutters to attenuate the light, minor restaging or whatever.

"I keyed virtually all of the interiors and night exteriors to about T2.8. This gave us the depth we wanted and didn't require excessively large amounts of light, which we didn't have the artillery for anyway. The Primo lenses also delivered a really luminescent image in this range. Fill light was more changeable, depending on the mood of a scene and time of day; it could range from one to three or four stops down from key accordingly. Part of the look involved a certain amount of contrast and a bit of a hardish edge from time to time, so we always tried to keep some sort of shadow working for us as part of the action, even if we shot at high noon."

Part of *Federal Hill*'s visual theme involved lighting each of the characters according to their personalities and motivations. Crudo elaborates: "Even with all your prep, so much of what you do when you shoot a movie is purely of the moment and can't be recreated or explained. It's only looking at a print now that I can see some of the other patterns emerging that are in line with what I originally considered way back when. For example, Nicky may be the heartthrob, but to me Ralph is the real star. He's a nutcase, sure, but there's a lot going on beneath the surface there. Generally, I tried to keep him a bit more mysterious than the others, sometimes using the old trick of letting his eyes go black or just staging him in such a way that he's a bit darker or more shadowy; I also sometimes

framed him as a prisoner of his environment. This wasn't a hard and fast rule because there were instances where I played completely against the theory. It just seemed to spring organically from what I was doing in his scenes overall. For Wendy, making her look good was the main concern, and with Libby that's always a cinch. Nicky, on the other hand, needed more attention. He was torn between two worlds — Ralph and the gang on the Hill and Wendy's world, which offered freedom and a fresh start. Therefore, several times when Nicky encounters Wendy, we show him moving from his own drabness into her light. The scene where she seduces him in the library stacks is a good example. As she goes to kiss Nicky she physically pulls him into her aura, causing him to share her glow for the first time."

In every film, production design and set decoration play a big role in defining the characters. For *Federal Hill* this was perhaps even more important than usual. "Without good things to photograph, all your work can be useless," said Crudo, who operated the camera himself for the entire film. "Production designer Bob Schleinig gave us a lot to use, and Michael took great care so that the audience would know that the locations and sets were genuine. He wanted to see all of the nuances of these people's lives. To accommodate this I stayed primarily on the wide lenses, mostly the 27. It was rare that we went tighter than the 40."

Panavision offers some of the best camera equipment available, but the film's grip/electrical package was a different story altogether. "Everything that wasn't a mess when we got it fell apart soon after," he says, laughing. "Except for one night when we managed to wangle a 6K HMI, our biggest lamp was a 4K tungsten unit that worked only when it wanted to. The rest were mismatched 1Ks, 2Ks and inkies. A lot of the time I had to pull



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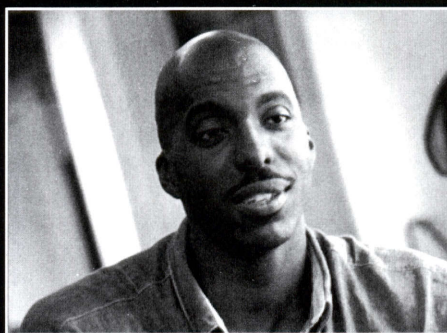
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people off the set in order to go fix things, and that hurt, because we were understaffed to begin with. I often thought we'd be better off with a Bic lighter and a roll of tinfoil. The rental house did send us all of the sandbags we needed, though."

The film's big setpiece is a high-speed, car-to-car duel between the Cadillac-driving protagonists and an aggressive, Jeep-driving yuppie. "Thanks to the influence of a cousin of Michael's, the State of Rhode Island was kind enough to close down an isolated stretch of highway for nine hours one evening," says Crudo. "Talk about dark — you couldn't see anything out there!"

Luckily, local filmmaker Brian Heller supplied his fully equipped camera car at a tremendously discounted rate. Crudo was ecstatic. "I mounted the 6K HMI on it and used it as a sort of mobile lighting/camera platform. While we shot from Brian's camera car, I had the thinly diffused lamp pointing directly back at the other vehicles from a position anywhere out to a hundred feet ahead of them. We got a nice illumination of the roadway and enough of a spread to get a little texture in the shrubbery off to the sides.

"For some of the coverage, the camera car did the exact same thing with the 6K, but we switched to shooting from the bed of a regular pickup truck that ran alongside the Cadillac and the Jeep. To save time and ensure long runs without stopping, I metered the light for the various distances the cars moved through and shouted instructions to my AC, Dave Paone, to adjust the iris accordingly as we rolled. Shooting went well, but this sequence was particularly hard for me because it was my very own Jeep that Nick Turturro was smashing with the tire iron. The junk car we were supposed to use didn't show up that night and my beloved CJ-7 was unceremoniously pressed into service. Real glamorous, this movie stuff. But it's an

exciting piece of film and I know in my heart we would never have gotten it without the help of Brian Heller — and my Jeep."

Daytime exteriors saw Crudo revert to the ever-popular, ever-despised shiny boards. "Sometimes just to put a little edge on someone I might use them clean or with a double net on them, but for fill, especially in the closer shots, I'd usually bang them through a silk just to take that hard curse off. They're the weirdest things — so primitive in a sense, but they get the job done. The downside is that they can eat up a lot of time chasing the sun all day." He used no filtration at all in the film save for an occasional red or yellow glass to bring out the sky on day exteriors that did not feature any people.

Editor Kate Sanford delivered a rough cut of the film two weeks after photography wrapped; the final cut was ready a month later. "I really leaned on her professionalism and good taste in setting the movie's rhythm," Corrente testifies. "After the wild ride we had shooting, it was a pleasure to spend some quieter time with her at the flatbed."

Despite the relative ease with which the editing process proceeded, Crudo wasn't out of the woods yet. "When Trimark Pictures picked up *Federal Hill* for distribution, they insisted we do the bulk of the finishing work in Los Angeles," he said. "So after striking our fine-grain master at DuArt in New York, Foto-Kem was tasked with making the dupe negative. There were lots of problems to say the least, chiefly in producing an answer print with contrast and density that even remotely matched what I'd been used to looking at. Weeks turned into months, during which Trimark's worldwide director of postproduction, Richard Jordan, and I labored with DuArt's Michael Schuler and Foto-Kem's Jim Carter and Ken Bell to find a solution. I was annoyed with the problems but I never lost hope

because we knew the original negative was pristine in every way. Apparently there's some mysteriously incompatible discrepancy between the duping processes used by the two labs. We ended up going back to DuArt for the dupe only. After that, Foto-Kem's release prints were very good. For a variety of reasons we were forced by then to use Eastman 5302 positive stock, but the stuff still looked great."

A full-frame D-1 video transfer of the completed work was made at ADS in Burbank. Crudo recounts, "With the exception of some minor anomalies in the fine grain, it was a fairly painless process. Telecine operator Larry Yore squeezed out tremendous detail. The quality you see at the cinema holds up well on tape, even when knocked down to VHS."

Federal Hill was a hit at numerous festivals during 1994, winning both the Critics Award and the Audience Award at Deauville. Its U.S. premiere took place last December in New York City at the brand new Sony Lincoln Square complex. A stream of excellent reviews followed as the movie opened in other cities, with the majority of critics making note of the striking cinematography.

"I've really been touched by the response," says Crudo. "Naturally, I have a few secret reservations about some elements of my work in this film — as you always do — but I'll never tell. That's part of the process of growing and getting better at your craft. Making this film was a tough road for everyone involved, and I'd be remiss if I didn't thank my crew: focus puller Dave Paone, second AC Osa Elmfors and gaffer Ian Cohen. They did terrific work under what I know were very trying conditions." ✱

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by David Heuring, Stephen Pizzello and Marji Rhea

In a town notorious for its ability to congratulate itself on the slimmest of credentials, the ASC's annual awards celebration, held at the Beverly Hilton Hotel on Sunday, February 26, has once again impressed even the most jaded industry professionals with its refreshing acknowledgement of creativity, hard work, and an appreciation for teamwork.

Gracing the event were such luminaries as the venerable Gabriel Figueroa, who accepted the ASC International Award, Board of Governors Award honoree Martin Scorsese, and Lifetime Achievement Award recipient Gordon Willis, ASC. Adding to the evening's glamour were presenters Morgan Freeman, Robert De Niro, Frances Ford Coppola, Val Kilmer, Gail O'Grady and Sela Ward.

We'll be covering the nominees for best feature cinematography in our next issue.

Miniseries

Don FauntLeRoy

Heaven and Hell (Part III)

Don FauntLeRoy, whose grandfather was a still cameraman and whose father owned an optical house, originally went to USC to play basketball, but after an injury he renewed an interest that been piqued by a 12th-grade cinema course. His first film job was in 1977 as a film loader on *The Turning Point*, shot by Robert Surtees, ASC. He then worked on the miniseries *How The West Was Won*, where he met first assistant David Meinardes, with whom he ended up working for several years.

Meinardes also introduced him to Harry Stradling, Jr., ASC, and when Meinardes, Stradling's usual first assistant, got tied up with projects, the cin-

ematographer asked FauntLeRoy to fill in. FauntLeRoy went on to assist 11 films shot by Stradling, gleaning from the veteran cinematographer as much technical knowledge as he could. "I developed my style from the guys I worked for, especially Harry and Bob Surtees," FauntLeRoy has said. "The old-school guys were all direct lighters. They would put a lamp up and then paint it down to what they wanted. When I first started out in the business, we were using 5248, then 53, then 47. With those film stocks you needed to use a lot of light.

"I did a lot of work with Billy Cronjager, ASC and I'd sit back and watch him walk into a set, take a look around and then start lighting at the back and move forward. He used a lot of light and just carved what he

wanted out of it. Those guys never used bounce light, and it rubbed off on me; I generally only use bounce lighting when I'm pressed for time."

He eventually landed work as a director of photography on an ABC Afterschool Special, which led to TV movies and low-budget films. FauntLeRoy worked on the first and second installments of the miniseries *North and South* as assistant cameraman to Steven Lerner, ASC and as operator for six weeks for Jacques Marquette, ASC, respectively. FauntLeRoy moved up to photograph *Part III* and promptly earned his first ASC Award nomination.

David Franco

Million Dollar Babies

Million Dollar Babies, set

during the Depression, chronicles the attempts of the parents of the world's first known surviving quintuplets to regain custody of their children from the government, who had turned them into a tourist attraction.

The visual style was understandably dark, and Franco and the art director and director worked to take off most of the color while staying in a warm tone. "We went towards a wide-angle feel for all of it, used a lot of lenses between 18 and 35, a lot of zooming," Franco recalls. The tricky part was matching the studio shots with the set shots, as well as trying to prep large locations, such as a city hall, on TV time: "It's still a mini-series, not a feature," he explains, "so no pre-light, no rig day — you have a couple of hours max, so you have to keep it very simple." Another allowance for the television format was his filtration: "I rarely use filters, but for TV I have to take the edge off, especially with a Primo lens. So the filtration went all the way through to the back of the lens."

Franco credits his "amazing dolly grip" for his ability to move with the actors and avoid using a rail in interior shots: "The

dolly grip had a little monitor for himself behind the dolly, so everybody's an operator. It's not very often you can do that — you have to have the team. It was such a good experience."

As a youth Franco wanted to become a globe-trotting photo-journalist, "covering wars and big crises around the world." By 13 he was following his father around in Africa as Franco Sr. conducted theater research. He spent eight years at the University of Quebec at Montréal, then with a couple of friends got into the music video business — and ended up doing about 200 of them. "I got lucky because music videos were pushed very hard here [in Montréal] and I got to do a lot of them as a director of photography very soon, so I got a lot of experience very fast and I kind of skipped the assistant part." Franco's resumé includes the features *I Love a Man in Uniform* (which won Best Cinematography at the Festival of Valladolid, Spain in 1993), *Soul Survivor* and *The Carpenter*, as well as the MOWs *Falling For You* and *Model By Day*.

Tony Imi, BSC *Scarlett (Part I)*

Although Toni Imi, BSC and the rest of the crew of *Scarlett* wanted a period look for the miniseries and to follow the look of the original movie, they did face the not-insignificant problem of shooting the majority of the interiors, set in Charleston, in England in the middle of winter — and then had to match it all two months later on location shooting in South Carolina. "Luckily," says Imi, "having shot the miniseries *Queen* in Charleston, (also by *Scarlett* director John Erman), I knew what the light was like there."

The biggest headache of the tricoastal (Ireland, England and the States) shoot was a storm sequence. The opening and closing of the storm scene were photographed in Charleston, but when the sequence was finished in a tank



Photos by Chris Pizzello

at Pinewood Studios in England, the sun was, of course, shining radiantly. "It didn't quite match," laughs Imi.

Imi tried to stay away from filtration and let the costumes and lighting tell the story and create the look. He carried the same Z series Zeiss lenses everywhere: "This was more of a soap opera, much more dialogue and not so much action. It had very elegant sets and settings and costumes — a very strong high-taste content."

Imi was introduced to photography by his father. When he was older, he did a hitch in the British Air Force, and then joined the BBC. "I started as a trainee cameraman for the BBC and within ten months I was an assistant and within another year I was a full cameraman," he recalls. His break came on a picture called *Long Ago Tomorrow*. He went on to shoot such films as *The Slipper and the Rose*, *International*



Left: Sela Ward presents to Tom Del Ruth the first of two ASC Awards for his work on ER.
Below left: Michael Watkins, upon accepting his obelisk, quipped, "First, I'd like to thank Tom Del Ruth for not entering this category."

Velvet, *Brass Target*, *ffolkes*, *Nate and Hayes*, *Enemy Mine*, *Buster*, *Wired* and *Firebirds*.

Edward J. Pei

Oldest Living Confederate Widow Tells All (Part II)

Pei, a native of Taiwan, arrived in America in 1979 and obtained a graduate degree in film from New York University. After working as a second AC, he put in time as a first AC and operator before achieving his goal of becoming a cinematographer. Pei credits as mentor English cinematographer Larry Pizer, with whom he worked for a seven-year apprenticeship. Pei adds that they're still fast friends.

Eight years ago Pei moved west to California. In 1993, Pei photographed three miniseries. In addition to *Oldest Living Confederate Widow Tells All*, he served as director of photography on *The Gambler 5* and *Stephen King's The Stand*, which earned Pei an Emmy nomination.

When asked how he enjoyed the assignment, Pei echoed the enthusiasm of his fellow nominees. "We had a great cast, and the shoot was really a lot of fun. But then again, I have fun on every job, so..."

Pei also made a recent foray into the world of feature filmmaking with director Mario Van Peebles on *Panther*. Pei counts among his accolades a Cable ACE Award for his photography on the Lifetime series *Veronica Claire*.

Michael Watkins, ASC*Family Album (Part I)***ASC Award Winner**

Michael Watkins, ASC has earned a pair of Emmys (in 1990 and '91), an Emmy nomination, as well as three consecutive ASC Award nominations for *Quantum Leap*. His mantle also displays a number of Clio Awards. Watkins' ASC Award for *Family Album* follows on the heels of his first major feature, *Point of No Return*. Other credits include the series *Scarecrow and Mrs. King* and *Almost Grown*.

Watkins has yet to take the accolades for granted. "I always felt like I had to drive myself harder every year. I'm always astonished to get nominated." His work on *Quantum Leap*, set in a different place and time and with a different director every show, was one of constant variety, which Watkins always enjoys. He also appreciated the show's emphasis on imagery, feeling that audiences are more visually sophisticated than they are given credit for.

He displayed his enthusiastic camerawork again on *Point of No Return*, a remake of the French *La Femme Nikita* and his break into big-budget features. "Mike goes from the dolly to the ground to the rafters," says John Stradling, assistant cameraman on *Point of No Return*. "He shoots from everywhere, and that keeps things very interesting. At one point he even strapped the camera to a ladder. For another scene we got on top of a crane and shot down through a ceiling fan." Gaffer Mark Abbot calls him a "cheerleader with a bullwhip."

His other feature credits include the comedy *Hearts and Souls* and the smaller-budgeted *Coonskin*, *Fighting Mad* and *Paramedics*.

"If you're slow, you're like a dinosaur," Watkins has said. "I like the momentum of television, because it teaches you a lot of good habits. You learn speed and attention to detail, and that's really important to carry with you."

Regular Series**John Bartley***The X-Files*

"Duane Barry"

"'Duane Barry' was probably the most interesting show we did," says *X-Files* director of photography John Bartley, "because you actually got to see a shape of aliens, but you still didn't know what they were." For this episode, "we had quite a few lighting effects. I had a lot of very bright light, a lot of blowing out of the frames so you could just sort of see an image. It's very hard to get that white look, particularly on TV, because it all gets clipped and pulled back."

The series finds the crew doing a lot of complicated shots, "some of which start out very wide and end up very tight, or vice versa, so they're quite difficult to light. The camera moves just about continually."

Bartley uses 5293 and 5298 film stocks on the show and avoids filtration: "In fact, it's just about filterless. I try to keep it clean and try to do any effects with lighting."

"It's not the easiest series around," he says of the show's 15-hour days. "It's a lot of work and very tough on the crew."

Bartley, who has "always been interested in lighting," worked in theater and then TV doing just that, and then ended up managing a rental house, freelancing on weekends on commercials as a gaffer; eventually it evolved into director of photography work on music videos, commercials, and trailers. His first feature was the sci-fi film *Beyond the Stars*. Since that time he has photographed the series *Booker* and *The Commish*, as well as the pilots for *Outlaw* and *Both Sides of the Street*.

Tom Del Ruth, ASC*ER*

"Day One"

ASC Award Winner

By taking the top honor in both this category and also in

the category of Movie of the Week or Pilot, Del Ruth has carved out a special niche for himself in the lore of the ASC Awards, becoming the first cinematographer to ever win two categories in the same evening. On his first trip to the podium, Del Ruth told the crowd, "I must tell you, I am truly blessed. . . certainly for me this is a culmination of years of work. It started for me when I was a little kid. In 1948, my dad [director Roy Del Ruth] gave me a small role in a picture he was doing called *The Babe Ruth Story*. I was captivated by the camera and the things that the crew did. I was [later] given the privilege of 'holding the lily' for some prominent cinematographers, and it was a thrilling experience — even more so than being in front of the camera and having a few lines of dialogue. From that time on, I had a wistful notion that I might one day join their ranks."

Upon his second trip to the podium, a stunned Del Ruth took a few deep breaths before addressing the throng again. "Here I am again," he said with a smile, shaking his head. "I'm astounded. To be nominated twice is fantastic, but to win twice is unbelievable. . . I accept this award on behalf of all of the other talented cinematographers who labor in television and frequently are unrecognized for their efforts. It's nice to see the honor given, and I think everyone should share in it."

Del Ruth's success as a cameraman should come as no surprise. He was groomed for the job from the start, having spent his youth in a neighborhood that should have been renamed Cinematography Street. "My dad was a director, but we lived around cinematographers," he reveals. "Namely, Russell Metty, an ASC member and Academy Award winner, and Bob Surtees, who was my next-door neighbor. And Jimmy Wong Howe lived right down the street."

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Masters of lens and light — this year's ASC Award nominees — gather on the steps of the ASC Clubhouse in Hollywood. From left to right, front row: **Tom Del Ruth, Owen Roizman, Gordon Willis, Gabriel Figueroa, John Toll, Molly (Mrs. Edward) Pei, Brian Reynolds.** Second row: **Conrad Hall, Marvin Rush, Awards committee chairman Bud Stone, John Bartley, Lauro Escorel, Tony Imi.** Third row: **ASC president Victor Kemper, Ozzie Smith, Don FauntLeRoy, Roger Deakins, Paul Elliott, Don Burgess, Tim Suhrstedt.** Unable to attend were **Felix Enriques Alcalá, David Franco and President's Award recipient Bill Clothier.**



Photo by Merritt Smith

houses with baseballs, the youthful Del Ruth mined his prominent neighbors for their views on the cameraman's craft. Their advice served him well, and in 1966 he landed his first job in the field, as a second assistant cameraman on *The Sand Pebbles*. He later went on to assist for such veterans as Conrad Hall, Jordan Cronenweth and Bruce Surtees. In 1980, Universal made him a director of photography on the series *Mrs. Columbo*. Since then, Del Ruth as split his time between commercials, music videos, television movies and features such as *The Breakfast Club*, *Stand By Me*, *Cross My Heart*, *The Running Man*, *Look Who's Talking*, and the most recent *Mighty Ducks* movie.

Del Ruth's work in the television arena has earned him kudo after kudo, and has resulted in programs of true quality. He was nominated for an ASC Award last year for his work on the pilot for the sci-fi series *The X-Files*, which has since become a cult favorite and one of the most

popular shows on the Fox network. His outstanding work on *ER* has made the medical drama one of the top-rated shows on television. With his Awards coup added to the mix, Del Ruth is truly a cameraman to watch closely.

Brian Reynolds *NYPD Blue*

"You Bet Your Life"

Brian Reynolds "always wanted to be a cameraman," he says. "I don't remember where I got that idea. But I know that I never wanted to do anything else. That was my dream."

By the time he was eight, Reynolds owned a Brownie 8mm movie camera, and he used it to make small films. A high school friend got him interested in still photography, and soon Reynolds was taking pictures for the school newspaper and yearbook.

He also filmed movies of football games every Friday night. He was allowed to take the school's Bolex camera home dur-

ing the week, and that's when he shot his first 16mm films. Reynolds earned an honorable mention in the Kodak Teenage Movie competition for a film which combined images with a Cat Stevens song, but narrative films were his specialty.

"*The Man From U.N.C.L.E.* was a big hit on TV," he says. "I saved enough money to purchase a Beaulieu Super 8mm camera, and got some of my friends interested in making short films. Different people would make up the scripts and play the parts, but I always shot and edited the film."

After graduation, Reynolds worked after graduation as a still photographer for a small studio for several years, taking pictures of inanimate objects for catalogs. He was working in the camera department at a retail store when a friend told him that Mattel was looking for a photographer to shoot pictures of toys for their catalogs.

"I didn't have a portfolio, so I assigned myself to create

one," he says, "and I got the job. Two of us opened a studio. It was a great education. I was working with terrific art directors at Mattel who taught me how to design images. I learned to ask myself where I wanted to direct the eyes of the audience when they looked at a picture."

Reynolds honed his craft in the crucible of trial and error. He started shooting video storyboards to test concepts for TV commercials produced by an ad agency. After a while, the marketing people at Mattel asked Reynolds to shoot the spots himself. That led to an opportunity to shoot and edit a series of spots filmed around the world for Hansen's, a soft drink manufacturer.

"We went to Sri Lanka, Bangkok, London, Italy, Mexico, the Arctic Circle, everywhere," he says. "It was just me and an assistant cameraman. We picked up local crews. They were thrilled. That's when I started to appreciate how privileged we are to work in this business."

Reynolds says that this experience began shaping his perspective in ways that paid big dividends when he started shooting TV series. "I learned that what really matters is your ability to put the money that the producer is investing on the screen," he says. "Shooting on locations on relatively small budgets forced me to think about developing a minimalist approach to lighting. There's always a faster and less expensive way to get a better shot."

Reynolds filmed numerous commercials after that, including a spot for blue jeans with director Sidney Galanty. That job resulted in an opportunity to shoot the first Jane Fonda work-out videos with Galanty. ("They wanted a film look," Reynolds recalls.) The videos got Reynolds into the International Photographers Guild, which opened the door for his first studio film, *The Danger Team*, a pilot for Lorimar Television featuring Claymation characters.

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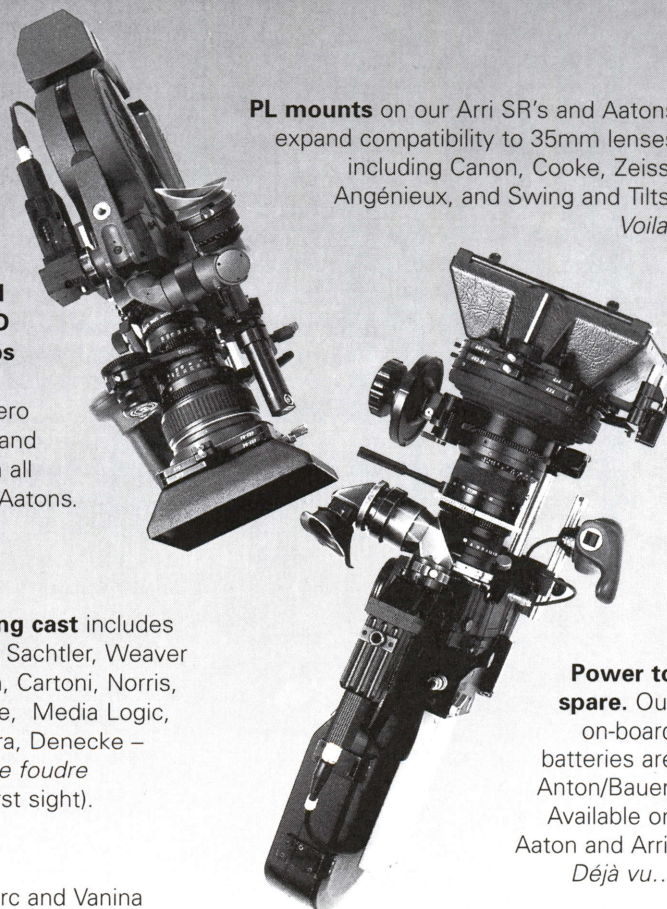
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The pilot didn't take root, but Reynolds' work caught the eye of director Robert Butler, who was making plans to produce *Sisters*, and Reynolds ended up filming the first six episodes. Butler introduced him to Gregory Hoblit, who was getting ready to produce *Civil Wars* for Steven Bochco.

His work on the *Civil Wars* pilot won him an ASC nomination in 1992. For both that show and *N.Y.P.D. Blue*, Reynolds has faced the same problem of making a New York setting believable in Los Angeles.

He made his jump from episodic TV to theatrical features with *Guarding Tess*, a dramatic comedy starring Shirley MacLaine and Nicolas Cage. His work on the episode "Oscar Meyer Weiner" won him an ASC nomination last year.

Marvin Rush, ASC

Star Trek: Deep Space Nine
"Crossover"

Marvin Rush, ASC was invited to shoot *Star Trek: The Next Generation* after producers Rick Berman and David Livingston saw his work on the visually striking but short-lived NBC sitcom *Frank's Place*. Rush was Emmy-nominated for his *Star Trek* work before moving on to *Deep Space Nine*. Prior to joining *Trek*, Rush also shot the series *Dear John*.

Rush, whose early career found him filming the Rose Parade every year, came to *Star Trek: The Next Generation* having never worked in a single camera one-hour format, and having never seen the show, nor sat through a full episode of the original one. The producers didn't consider this a drawback; it enabled him to create his own look for the show without being influenced by the first. In fact, the realistic look of the show, with its seamless special effects, is in many ways responsible for making it appealing to non-Trekkies, who might be less willing to sus-

pend their disbelief than fans of the first show.

The *Star Trek* shows have brought to television their own mark of beautiful and complicated imagery, which is no small feat to achieve. As he shoots he has to consider the special effects ("How do you light a green planet?"), keep prosthetic pieces from showing and work around opticals. "On a show like this," he has said of his *Star Trek: The Next Generation* work, "time is the most precious commodity. It's also the enemy. I've got plenty of equipment, I've got plenty of personnel, I've got plenty of money being spent to get the job done, but the clock is always running. For that reason, you've always got to consider the relative importance of the scene at hand. Not that anything's a throwaway, but there are scenes where you just look at your watch and it tells you what to do."

Not that he's complaining — "Star Trek is very much a cameraman's show," he has said. Also keeping him enthusiastic about the shows is the knowledge that die-hard, rabid fans — with whom he communicates on several online *Star Trek* networks — are watching his work.

The grueling schedules are hard: "you have to be sensitive to the basic fact that people get tired. The most important thing for myself is to keep a really positive attitude, a real sense of excitement about the work and the commitment to artistry. I'm certainly not finished learning how to do this job."

Roland "Ozzie" Smith

Dr. Quinn,
Medicine Woman
"The Washington
Affair"

Having already taken home a 1994 ASC Award for this episode, Smith has his sights set on his first Emmy. Following in the footsteps of his father, the legendary Harkness Smith, ASC, the younger Smith began his career in the camera department at

MGM, where he met an array of top-flight mentors, including George Folsey, ASC, Karl Freund, ASC, James Wong Howe, ASC and Robert Surtees, ASC. After soaking up the considerable wisdom that surrounded him, Smith moved up the ladder and achieved his dream of becoming a director of photography. Prior to *Dr. Quinn*, his television work included *Street Justice* and *Alien Nation*.

Smith's weekly rounds on *Dr. Quinn* require him to convincingly convey the atmosphere of the show's period setting, an 1860s Colorado mining town (the "town" is actually located in Agoura Hills, CA). The cinematographer's methodology is dictated by the fact that the show is shot in 16mm. After researching other shows shot in 16mm, Smith concluded that he would have to avoid high-speed film because of grain problems. He sought out the two finest-grained stocks he could find, Kodak's 7245 and 7248. Because 16mm cameras lack dual-pin registration, camera stability and filtration are also crucial considerations. The camera's limitations, as well as the show's high number of exterior shots, led Smith to avoid the use of diffusion to ensure a full transfer.

The show's overall look — warm tones, rich blacks, and color saturation — was inspired by Vilmos Zsigmond, ASC's naturalistic work on *McCabe and Mrs. Miller*. Smith's undiffused photography is a departure from Zsigmond's approach, but the cinematographer explains that a soft look, while acceptable in 35mm, tends to lose depth and sharpness in 16mm.

Smith further enhances the look of the show by enlisting the aid of Digital Magic in postproduction. The company's work helps him to maintain a consistent sky in scenes that may be shot over a period of hours, and to balance the exposure of the show's romantic couple, Jane Seymour and Joe Lando, who

tend to reflect vastly different amounts of light. Smith has also found that Digital Magic can help him compensate for his cameras' inability to vary shutter speeds, a problem which forces him to rely upon dissolves and f-stop changes.

Movie of the Week or Pilot

Felix Enríques Alcalá
Earth 2 (pilot)

On *Earth 2*'s pilot, Alcalá was faced with shooting under the ever-changing skies of Santa Fe, New Mexico. After asking for pointers from fellow cinematographer Owen Roizman, who had shot *Wyatt Earp* there, "I decided, in order to get a consistent look throughout, to go with Fuji film," he recalls, "and I used tungsten light outside all the time for everything, which gave the faces a very warm, red kind of look. I also put an overall yellow filter on the camera." He actually developed this technique during his years dealing with telecine labs. "I created mistakes for the laboratory to fix — when they transfer the film they take the red out, and by taking the red and the yellow out, you end up with bluer skies, greener backgrounds, and normal face tones. It's like playing three-dimensional chess: you just have to work backwards from the system and know what the electronics are and what the colors are."

Alcalá was lured to *Earth 2* by the idea of working with a spacecraft. "I've always wanted to do a spacecraft. I've always had a theory that the spacecraft, being its own personality, should be able to light the set. So we split hundreds and hundreds of little bitty practical lights behind panels so everything would light up and make the spacecraft look like it was alive. Those lights would be bright enough that they would light faces if you got next to them."

Alcalá originally dreamed of a career as a photographer for *Life* Magazine, but was thwarted

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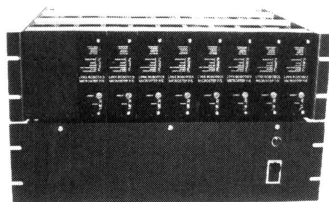
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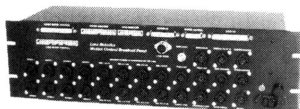
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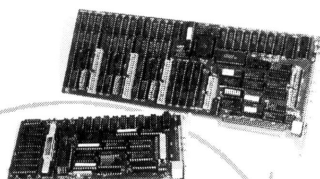


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by the fact that it went out of business when he graduated from high school. In college he moved into moving film — "I figured if one picture was really great, a bunch of them put together has got to be even better" — and after graduating worked as a technician, learning the grip, electrician and gaffer's end of the work, as well as working on documentaries in Dallas. "I figured the key to great photography was lighting, so I learned lighting and forgot about the camera."

Alcalá ended up in Hollywood as a first cameraman at 27. He since has worked in hundreds of commercials, and entered the TV realm three years ago. He's done the first two shows of *Homefront*; *Going to Extremes*, shot in Jamaica; *Under One Roof*; and Disney's *Earnest Greenstory*.

Alcalá was recently nominated for a DGA Award for his direction of the series *ER*, and is currently directing his first MOW for NBC, starring Susan Lucci.

Tom Del Ruth, ASC

ER (pilot)

ASC Award Winner

See profile under Regular Series.

Paul Elliott

And the Band Played On

"Just making a film about an important and interesting issue doesn't make it dramatic," notes English-born cinematographer Paul Elliott about the controversial HBO film *And the Band Played On*. "It isn't a conventional story with a clear dramatic arc, but rather a lot of separate, interlocking pieces, so I felt that photographically we should try and tie it together and give it some emotional punch. I tried to push the naturalism toward a more dramatic but still reality-based style." Elliott's collaborators on the project, who had much-publicized creative differences with the cable network concerning the film, included director Roger Spottiswoode

and producers Midge Sanford and Sarah Pillsbury.

Elliott's concerns on the project tended away from the political, however, and toward the practical, namely, shooting a 127-page script on 54 different sets in a 34-day schedule. With the exception of some San Francisco exteriors, the entire film was shot in Los Angeles, which ended up doubling for places as far-flung as Africa, Paris, New York, Atlanta and Copenhagen. A good deal of the story takes place in hospital rooms and scientific laboratories, so giving each scene a distinctive look and feel became crucial; otherwise the endless succession of medical facilities might have proven visually boring as well as confusing for the audience.

Elliott began his career as a still photographer, and after attending the London Film School, he shot a number of documentaries. In 1978, he moved to the U.S. His work on *Rachel River* was awarded Best Cinematography at the 1988 U.S. Film Festival, and he was a 1992 ASC and ACE Award nominee for *Citizen Cohn*, the story of Senator Joseph McCarthy's vicious right-hand man. Another ACE nomination came for a *Tales From the Crypt* episode.

As for *And the Band Played On*, Elliott enjoyed a close working relationship with Spottiswoode. The seriousness and importance of the subject matter clearly affected everyone involved with the production. "I think people felt they were working on a worthy project," says Elliott. "In many of the hospital scenes, we used extras who actually have AIDS, and their bravery and sense of humor was deeply moving. For us it wasn't all make-believe; it was about real people dying."

Lauro Escorel

Amelia Earhart:

The Final Flight

The son of a Brazilian diplomat, Lauro Escorel was

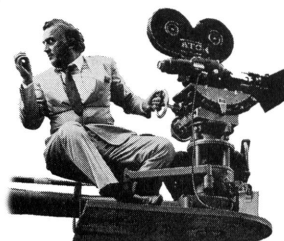
born in Washington, D.C. and spent his formative years in Brazil. In the heady days of the 1960s Cinema Novo movement, Escorel hung around his brother Eduardo's editing room. At age 14, he picked up a job as a still photographer on Glauber Rocha's *Terra em Transe*. He shot his first feature at the ripe age of 21. More than a dozen features later, Escorel got what he recalls as his big break: *King of the Night* for Hector Babenco. Escorel first garnered notice stateside for a later collaboration with Babenco, the ambitious *Ironweed*, and the beautifully photographed *At Play in the Fields of the Lord*. The list of his feature credits, many with Babenco, includes *Lucio Flavio*, *Amada Amante*, *Bye Bye Brazil*, *They Don't Wear Black Tie*, *Quilombo*, and *Better Days Ahead*.

According to Escorel, the challenge for any director-cinematographer team is "to find a balance between the drama of each character, the intimacy of the character, and the scope of the environment where the story is being shot."

The nominated story is a biographical tale of the last days of the "female Charles Lindburgh," Amelia Earhart. Mystery still shrouds the disappearance of the famed adventuress, which occurred during an around-the-world stunt. Some accounts blame her navigator's drinking habits, and some shift the blame to Earhart's less than Lindburgh-like piloting skills.

To his surprise and dismay, Escorel had to fight hard to keep his images intact through the television postproduction process. "Why did they hire me," he wonders, along with the rest of us, "if they don't want my images?"

Of *Amelia Earhart*, Escorel remembers the most difficult scene being the plane crash, a sequence shot with six cameras. "We had to combine the crash itself and the back projection stuff I shot on stage, and matching them was quite a challenge. I was very happy with the way it ended."



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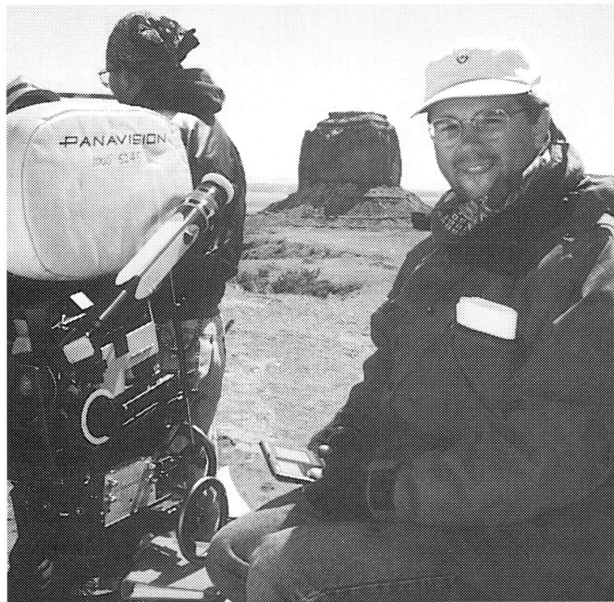
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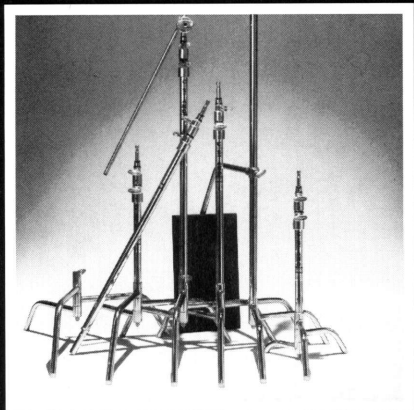


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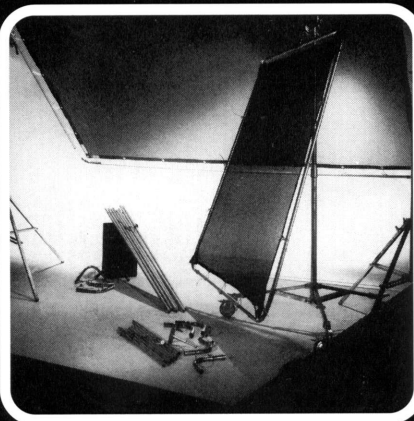
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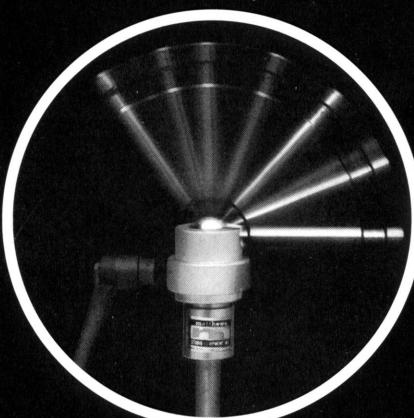
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Tim Suhrstedt
Chicago Hope (pilot)

Originally an economics major in college, Suhrstedt was seduced in his last year of school by an honors cinema course, for which he ended up making a short film as his thesis. After graduating he went to the Maryland public broadcasting offices and "sort of wheedled my way in there." He finally got a job at the film department as a director-cameraman, where he made documentaries on performing arts in the Baltimore-Washington area. There he decided that his interest was in cinematography, not directing, and he eventually left for the West Coast and a year at the AFI.

For the next three years, while waiting to get into the union, he used his 16mm experience to shoot documentaries, industrials, and pre-MTV music videos, travelling to Europe, Japan and Australia. At the same time, he began assisting, then operating, on independent films, at a time when the indies were just moving from exploitation movies to more dignified subjects, and with that work gained a lot of experience in a short time.

He got his first break on a low-budget feature — "I just badgered them until they let me be the director of photography" — *House on Sorority Row*, then shot a couple of films for Roger Corman, including *Android*, "a tongue-in-cheek B-movie," and *Suburbia*, about the punk scene. He also shot *Teen Wolf*, *Mystic Pizza*, and *Noises Off*.

The director on that last film became one of the producers on *Chicago Hope* and asked Suhrstedt to shoot the pilot a year ago. Suhrstedt was impressed with the look of the sets: a state of the art, high-tech hospital, post-modern and slick. The set had been built to be able to double with the Los Angeles convention center, an airy space with huge walls of glass. "We wanted [the show] to look very fine-grained, very sharp, but with very soft

light." He also avoids filtration; "because of natural degradation of broadcast by the time a show is seen, [filtration] looks like a less-than-perfect lens."

Since shooting the pilot, he's gotten more and more into mixing color temperatures. "I almost never use a neutral light — everything's always to the cool or to the amber. We've gotten to like slightly cool fluorescents mixing with a real warm sun mixing with some blue skylight, so it's on the surfaces and the walls and the floors. But also as people turn their faces they get different little glances and kicks of different colors."

"I'm always lobbying to use real long lenses because the set permits it, and I love getting back and using a longer focal length, catching the reflections off the walls and floors."

The nature of the show makes for long hours — making actors look like they're really operating on a heart isn't easy, and involves prosthetic effects and real medical equipment, as well as poking around in cow's hearts and goat's innards. "The medical stuff is very complicated. They go to great lengths to make it accurate. My kids love coming here; they love all this blood and guts."

Suhrstedt's other credits include *Getting Even With Dad*, *Traces of Red*, *The Favor*, and *Bill and Ted's Excellent Adventure*, as well as episodes of *Picket Fences* and *Tales from the Crypt*. ❦

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This year's recipients of the Academy Awards for Scientific and Technical Achievement, who had their day in the spotlight at a ceremony on March 4 at the Regent Beverly Wilshire Hotel, include Petro Vlahos, who picked up his third Oscar statuette. Vlahos was honored for his work with his son Paul on an electronic bluescreen compositing process for motion pictures, which can be seen in effects-laden films such as *Clear and Present Danger*, *Interview with the Vampire*, and *Speed*. Other honorees include a collection of companies and individuals who contributed separately

"We always knew that we were doing things that had never been done before, and that it was an important new phase in the development of film technology."

— Dr. Mike Boudry,
Computer Film Company

but equally to several advancements in the film industry.

Scientific and Technical Awards are given for devices, methods, formulae, discoveries or inventions of special and outstanding value to the arts and sciences of motion pictures and which have a proven history of use in the motion picture industry.

Awards may be granted in any of three classifications: Academy Award of Merit (Oscar statuette), for basic achievements which have a definite influence upon the advancement of the industry; Scientific and Engineering Award (Academy plaque), for those achievements which exhibit a high level of engineering and are important to the progress of the industry; and Technical Achievement Award (Academy certificate), for those

Sci-Tech Awards Salute Cinema's Forward-Thinkers

by Marji Rhea

accomplishments which contribute to the progress of the industry.

Past recipients of the Academy Award of Merit include the developers of the modern motion picture camera; CinemaScope, VistaVision and Todd-AO; Dolby sound systems; and the fluid-damped camera head for motion picture photography.

Also honored with an Oscar statuette is the annual recipient of the Gordon E. Sawyer Award, which recognizes a lifetime of achievement by an individual "whose technological contributions have brought credit to the industry." However, none was given this year.

This year's recipients were as follows:

Academy Awards of Merit (Oscar Statuette)

The Eastman Kodak Company for the development of the Eastman EXR Color Intermediate Film 5244. The improved color reproduction, tone reproduction, and image structure of this film allows for seamless transition among titles, special effects, and original photography. Release prints made from duplicate negatives are virtually indistinguishable from prints made from original negatives.

Petro Vlahos and Paul Vlahos for the conception and development of the Ultimatte Electronic Blue Screen Compositing Process for motion pictures, a replacement of the optical approach that offers solutions for black gloss, impure and uneven backing lighting, noise, and diffi-

cult object characterizations such as hair, motion blur, transparency, arbitrary colors, and shadows.

Scientific and Engineering Awards (Academy Plaques)

George Suave, Bill Bishop, Arpag Dadourian, Ray Feeney and Richard Patterson for the Cinefusion software implementation of the Ultimatte Blue Screen Compositing Technology, a computer-based implementation of the Ultimatte Cinefusion process that uses intelligent matte decision algorithms and a powerful graphical interface to create an intuitive blue screen matte extraction tool.

Lincoln Hu and Michael MacKenzie of Industrial Light & Magic and Glenn Kennel and Mike Davis of Eastman Kodak for their joint development work on a linear array CCD (Charge Coupled Device) film input scanning system. Such systems are used to convert motion picture sequences into digital data which is used for postproduction manipulation, enhancement, compositing, and visual effects.

Ray Feeney, Will McCown and Bill Bishop of RFX, Inc. and Les Dittert of Pacific Data Images for their development work with area array CCD (Charge Coupled Device) film input scanning systems.

Gary Demos and Dan Cameron of Information International; David DiFrancesco and Gary Starkweather of Pixar; and



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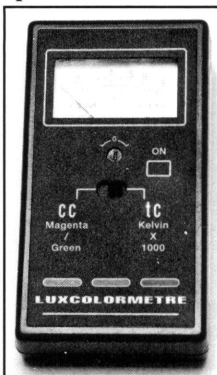
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Scott Squires of Industrial Light & Magic for their pioneering work in the field of film input scanning.



Dr. Mike Boudry of Computer Film Corporation for his pioneering work in the field of film input scanning.



Iain Neil for the optical design and Al Saiki for the mechanical design of the Panavision 11:1 Primo Zoom Lens for motion picture photography, which allows footage exposed with this zoom lens to be intercuttable with film exposed with any of the Primo prime lens series.



William A. Warner for the concept and the technical staff of Avid Technology for the development of the Avid Film Composer for motion picture editing, a digital, nonlinear 24 frame-per-second editing machine using compression algorithms that enable shots to be stored, recalled, manipulated and played back instantly.



Paul Bamborough for the concept, Nick Pollack and Arthur Wright for the hardware development, Neil Harris and Duncan MacLean for the software development of the Lightworks Editor for motion picture editing.



James Ketcham of JSK Engineering for the concept and design of the MC211 microprocessor-based motion controller for synchronizing sprocketed film with time-code-based machines. The unit is a smart controller which can drive different makes of film machines at several common frame rates and synchronize them to a variety of references, and is able to interface with time-code machines and other microprocessors. It has appropriate controls for dialogue

replacement and sound effects recording.

Technical Achievement Awards (Academy Certificate)

Audio Tracks, Inc. for the design and development of the ADE (Advanced Data Encoding) System, which creates an encoded time-code track and database during the initial transfer of the production sound dailies, providing a method to bridge the gap between conventional film picture editorial and digital sound postproduction in order to facilitate subsequent editing.



Colin Broad of CB Electronics for the design and development of the EDL (Edit Decision List) Lister which creates an encoded time code track and database during the initial transfer of the production sound dailies.



B. Russell Hessey of Special Effects Spectacular, Inc. and Vincent T. Kelton for the hardware design and George Jackman of De La Mare Engineering, Inc. for the pyrotechnic development which together comprise the non-gun safety blank firing system, which produces the effect of a gunshot in motion pictures, yet is extremely safe even when fired at very close range at performers, and which synchronizes gunshots to bullet impacts.



Emanuel Previnaire of Flying-Cam for his pioneering concept and for the development of mounting a motion picture camera on a remotely-controlled miniature helicopter. In 1979, the Flying-Cam provided the first unmanned, free-flying, close-range aerial camera for motion picture photography.



Jacques Sax of Sonosax for the design and development of the Sonosax SX-S portable au-

dio mixer, a lightweight, battery-powered, audio mix panel which has achieved worldwide acceptance in motion picture production.

Dieter Sturm of Sturm's Special Effects, Int'l, for the creation and development of the Bio-Snow 2 Flake, a bio-degradable and environmentally safe product for use in motion picture special effects to simulate dress and falling snow.

David A. Addleman and Lloyd A. Addleman for the development of the Cyberware 3030 3-D Digitizer, which uses laser and video technology to capture the shape and color of an object in three dimensions, the computer equivalent of a 3-D camera. This results in a computer database that can be manipulated and animated for use in motion pictures.

Mark R. Schneider, Herbert R. Jones, Christopher D. Conover and John R.B. Brown for the development of the Polhemus 3 Space Digitizing System, which can take 3-D measurements from a static object in order to construct a computer database from a complex real-world object.

Jack Smith, Michael Crichton and Emil Safier for pioneering computerized motion picture budgeting and scheduling; the early work of these men demonstrated the practicality of motion picture budgeting and scheduling software on small computers.

Frieder Hochheim, Gary Swink, Dr. Joe Zhou and Don Northrop for the development of the Kino Flo Portable, Flicker-Free, High-Output Fluorescent Lighting System for motion picture set illumination, to match 3200K or daylight. This system

incorporates remote ballasting and makes available very flexible, compact, portable set-lighting fixtures.

Stephen Greenfield and Chris Huntley of Screenplay Systems for development of the "Scriptor" software, which automatically formats a writer's work into the industry-standard screenplay page layouts.

Clay Davis and John Carter of Todd-AO, for the pioneering effort of computer-controlled list-management-style ADR (Automated Dialogue Replacement), which allows cue lists to be laid out in advance, entered quickly and modified if necessary, saving time on the dialogue recording stage.

Stephen W. Potter, John B. Asman, Charles Pell and Richard Larson of LarTec Systems for the advancement and refinement of the computer-controlled list-management-style ADR (Automated Dialogue Replacement) system via the LarTec ADR System that has established itself as a standard of the industry.

Art Fritzen of the California Fritzen Propeller Company as the designer and sole manufacturer of the Eight-Bladed Ritter Fan Propellers, which incorporate a vortex spoiler to break up the sonic boom created by the propeller's high-speed tip and create a "quiet" wind machine for use in motion pictures.

Medal of Commendation

John A. Bonner, chairman of the Scientific and Technical Awards committee, in appreciation for outstanding service and dedication in upholding the high standards of the Academy of Motion Picture Arts and Sciences.

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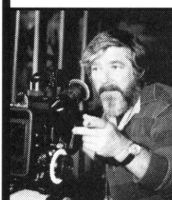
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Heartbreak Presages

The Last Good Time

Cinematographer Claudia Rashke lends a lyrical quality to cinematic exploration of one man's loneliness.

by Brooke Comer

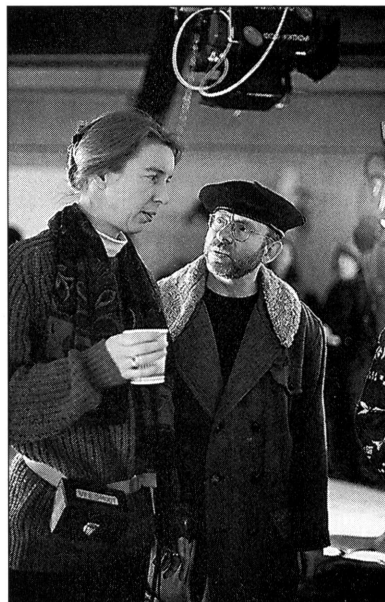
Joseph Kopple lives alone in his five-flight walk-up in Brooklyn. He spends his days playing the violin, reading, and visiting an old friend in a nursing home. He fends off the advances of an older female neighbor and dreams of his dead wife — until one day, 21-year-old Charlotte knocks on his door, looking for a place to hide, and changes his life forever.

The premise of *The Last Good Time* intrigued director of photography Claudia Rashke. The project is not an action film, but she anticipated extensive camera moves to portray the lonely world of Kopple (played by Armin Mueller-Stahl). When Rashke and director Bob Balaban first began to talk, "I started to get a feeling for the way this character controlled his life," says Rashke. "He didn't have much to control, but what he had, he hung onto." Rashke and Balaban's "talk," which was really Rashke's job interview, segued immediately into prep.

Cinematography is a multidisciplinary art form for Rashke, who approaches each job not only as a photographer, but as a dancer, painter and sculptor, fields in which she's well-schooled. Not surprisingly, she looks for the choreography, the color and the shape of each scene. The challenge is to catch the emotional subtext in each scene. "I have to ask myself, 'Is it critical to the plot? Do you want to clue the audience in? Where is the best place to put the camera to portray the emotion? For me,

cinematography is a kind of subconscious body language, the lines between what is being said, a form of communication expressed through the body, motion and light."

Rashke, a native of Hamburg, Germany, grew up in an artistic family with film-busi-



ness connections. Her grandfather owned a chain of local movie theaters; her mother eventually took over, deciding which movies would come to town. Rashke was inspired by films ranging from Laurel and Hardy slapsticks to James Bond adventures. Some of her early idols included Alfred Hitchcock, Orson Welles and Martin Scorsese. "I never thought about the photography part," she says. "I never thought, 'That's what I want to do.' But I couldn't

get enough of the films."

The daughter of a musician and a painter, Rashke was encouraged to study the arts. "My father would always drag me to museums. We'd go to Paris and I'd be stuck in the Louvre for days." In high school, she began to take pictures, eventually moving on to a movie camera: "I played around with a Super 8 camera, doing all kinds of trick photography."

Film was one of the many art forms Rashke explored in her teens. She studied fine arts in college, took up music like her mother and followed her father into painting and sculpting. "But none of these art forms held my interest enough to make me feel complete," she says. She was fascinated by the process of sculpting, painting and composing "in terms of the communication I had with the material. But it was a very lonely process without feedback." Rashke took up dance "because there were people, there was music. I felt like a dancing sculpture."

Rashke came to the New York as a student of modern dance under Martha Graham and found the city as important an influence as her favorite filmmakers. "I fell in love with New York," she admits. "It was the most vibrant city I'd ever seen. I had totally moved away from photography. I was on a path, then someone said 'Look over here,' and there was this spectacular new thing, filmmaking. And I was looking out a new win-

Cinematographer Claudia Rashke talks things over with director Bob Balaban.



By allowing Charlotte (Olivia D'Abo) to take refuge in his world, Joseph Kopple (Armin Mueller-Stahl) changes his future.

dow at something I'd never seen before."

Raschke supported herself as a dance student by waitressing. One of her fellow waitresses was shooting a student film and asked her friend to assist. "She'd seen my still photographs and thought I had the talent and technical knowledge," Raschke remembers. Even though she'd never shot anything so ambitious in her Super 8 days, she agreed to work on the film. "I was always game for something new," she adds.

The first day on the set was an experience Raschke will never forget. "Everybody was running around with light stands. There was a logic to what went on that was very mathematical. I've always been fascinated by mathematics and physics."

When the director called "action," Raschke felt shivers go up her spine. "Everyone was quiet. There was this incredible magic. It was storytelling. It was fantasy, but it was somehow real. I was immediately taken in by the

sensation. All that time I'd been torn between dancing, painting and sculpting. Here was an art form that brought it all together. It was suddenly very clear. I was going to be a cinematographer."

Raschke first worked with an Arri SR. Holding the camera, she realized that she'd found a way to combine her interests in movement, art, mathematics and physics via one piece of equipment. "I'd sculpted in clay and stone, and working with the camera was like working on a little sculpture. When I moved with it, I felt like I was dancing with a partner." Shooting became a kind of choreography, figuring out how to get from point A to B. "I'd follow the actors, floating like a kind of ghost. To me, that's what camera motion is all about. It's being there and yet not being there."

While Raschke studied at New York University film school, she was fortunate to meet valuable contacts who helped her in the workplace. She got her first leg up in 1986, when an assistant cameraperson for a Hall and

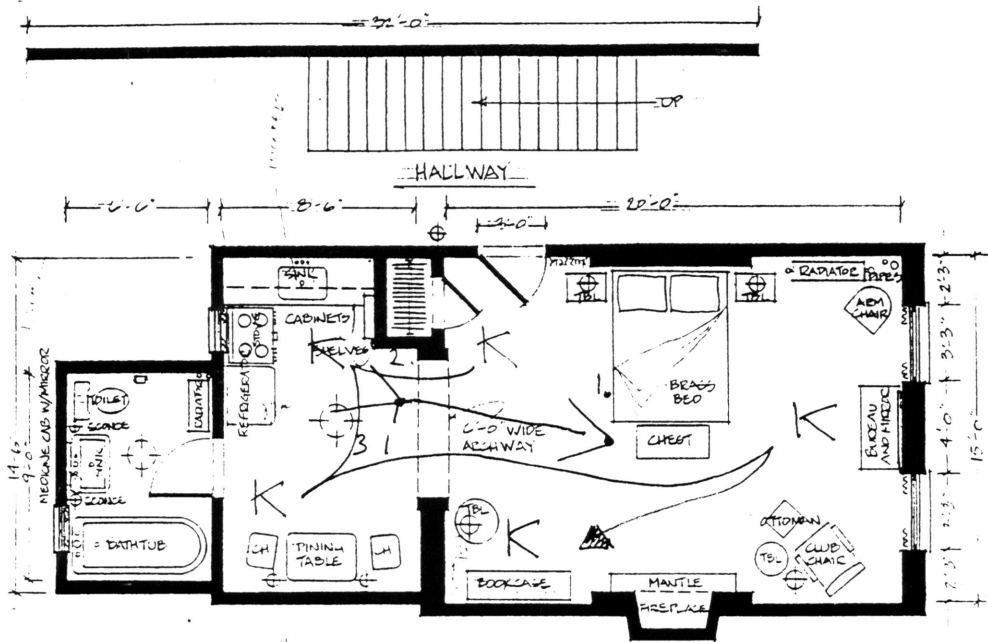
Oates concert at Madison Square Garden called in sick. Panic set in. Raschke, an assistant for the production company that was filming the concert, was told to start making calls and find a replacement. "I won't have to call very far," she told them. She got her first break, and from then on worked as a camera assistant.

Raschke is most grateful to her fellow women cinematographers who helped her. "I got incredible support from Diana Taylor, who started in the business at 17 and has been in the business 20 years. She's been a gold mine of advice. When she'd hire me, I'd ask her constant questions — why she was lighting a certain way, why she was doing a camera move a certain way.

"She told me that you can't just study cinematography, you have to accumulate a body of work. It's like being a painter: you can't be a painter and just study paintings. The only way to become a cinematographer is by doing it. Get your hands on whatever can make it happen. Experi-

SC. NO 66 #1 INT. DAY STEADICAM

Anatomy of a shot: #66 - INT Day Kopple's Apt. - set. 1. STEADICAM WIDE shot of K (Kopple) looking for a good hiding place for the money. Camera moves into OS-MED (over shoulder, medium) shot whenever it looks like K has found a place to hide the money. Camera tilts up from OS (over shoulder) shot into MCU (medium close-up) shot of K. But K changes his mind and walks away with it into another WIDE shot. Camera moves into a MCU shot of the money as he decides to hide it in a book on the bookshelves.

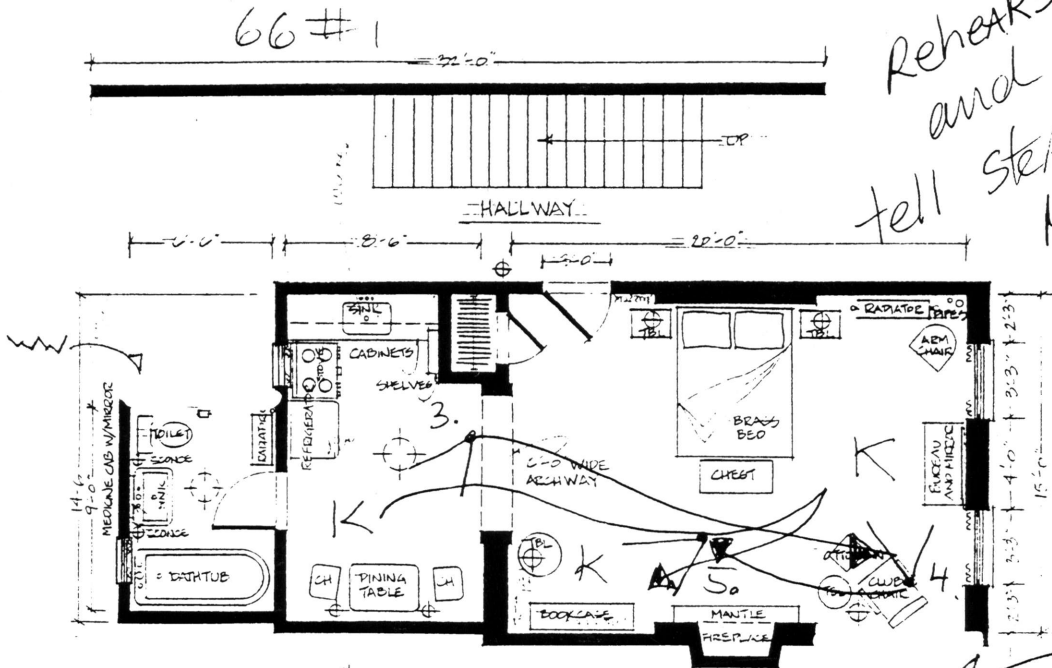


"THE LAST GOOD TIME"
KOPPLE'S APARTMENT PRELIMINARY PLAN 1/4" = 1'-0"

Audience → SP
OR the
2nd thought
(After thought)

continues

CAMERA moves
like spy -
Rehears
and chase.
tell Steadicam about
motivation!



"THE LAST GOOD TIME"
KOPPLE'S APARTMENT PRELIMINARY PLAN 1/4" = 1'-0"

WALL
REMOVED

ment. Explore the psychology of camera moves and lighting. And I followed her advice."

Raschke went to Columbia's film school and offered her services to students; among the many student projects she ended up shooting was *Indian Camp*, a visualization of one of Hemingway's Nick Adams stories. "I loved that project," says Raschke, who met Apaches during the production. "It was an exchange of thoughts with such a different culture." That project won enough attention to attract Gersh Agency principal David Guc to a screening. Afterwards, Guc sought out Raschke and became her first agent.

Raschke worked closely with director Bob Balaban during prep on *Last Good Time*. "Prep is a very important time for me," she says, "especially on low-budget films where every dollar counts." But she still had to be careful about what she ordered. "I had to calculate carefully exactly how much light I'd need for each set. For instance, I might need two 4K HMIs, two 6K HMIs and a 4K Xenon for one set and an additional small lighting package to pre-light another set."

Raschke drew up a blueprint of each scene, with symbols for the camera, character and props. "Bob and I preconceived the entire film," she explains. "That's how I often work when I have enough prep time. I have



Near left: Lionel Stander (left) and Mueller-Stahl prepare for their next scene. Below left: Silhouetted against a pre-lit set, Raschke and Balaban observe Mueller-Stahl's rehearsal on the violin.

detailed lighting plots and camera movement diagrams. Once I've done this work, I know that even if there's a big change, I can deal with it because I know my strategy. I can make adjustments and still know how it'll come out in the end. It's one way to make the most you possibly can out of a limited budget."

Raschke also enjoyed a good relationship with Balaban. "Bob loves working with actors. His sensitivity brought out a lot in terms of my ability to visualize." She also credits producer Dean Silver, "who supported our creative needs at all times."

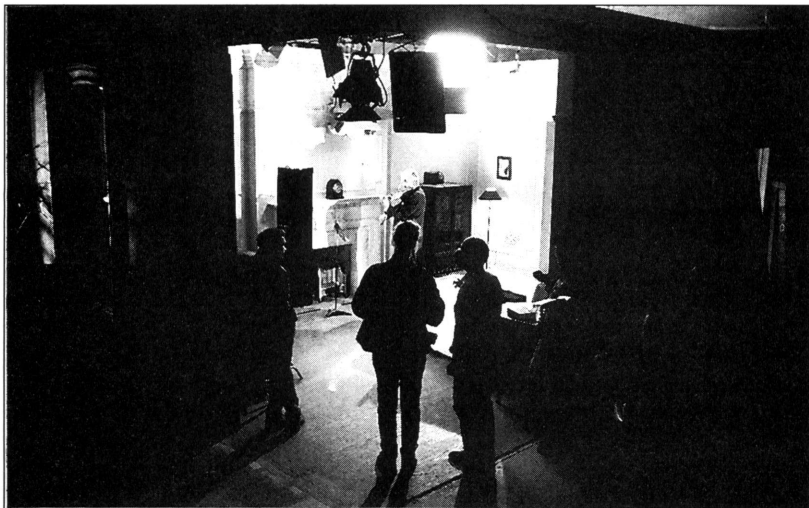
Raschke's films include *The Trust*, *Charlie's Ear*, and *Thank You and Good Night*. She's also shot TV shows ranging from *Monsters to America's Most*

Wanted, award-winning promos for Nickelodeon, and numerous documentaries.

Feature shooters from documentary backgrounds often have an affinity for natural light, cultivated from days when that's all there was. But Raschke has her own influences. "I'm very much influenced by classical painters," she explains. In *The Last Good Time*, it was Carravagio.

After Balaban and Raschke decided to go with a hard light to depict the loneliness of Kopple's world, Raschke went back to her "book of masters" for a painterly influence. She found Carravagio. "In previous films, I've used Impressionists, like Monet. When I look at the Old Masters, I notice the way they take liberties with the logic of light."

Raschke realizes that a window source may dictate that light should fall in an exact spot, "but I like to mix mood lighting with motivated lighting. And if I want the light here, not there, I'm going to paint a sparkle exactly where I want it. So I always analyze the Old Masters closely to figure out how they manipulate light and shadow, how the brushstrokes and the textures of their paintings could be the motivation for my lighting. Because with those brushstrokes, you're creating a mood. Mood is not logic. Mood is emotion, the subtext of where you want to be."



Turning the elements to their advantage, crew members add artificial sunlight to a snowstorm.



When Raschke wanted Kopple to look thoughtful, "I had to find a way to visually portray 'thoughtful.' In lighting terms, it means someone in low lighting in the foreground, with a window in the background that's brightly lit to show the separation between that person and the world."

Raschke fell in love with Conrad Hall's visual translation of panic in a scene in *Marathon Man*. "Dustin Hoffman running down the ramp of the Brooklyn Bridge is the best example for me of total panic. Far in the distance, you see a very bright light which is not a motivating source, but a fixture used to illuminate backlight. As Dustin comes closer into the center of the frame, he blocks the light, then reveals it, so it totally glares at the lens before he blocks it again. It is an exact visual translation of panic. One second you can think clearly, the next second you're absolutely blocked."

The Last Good Time was Raschke's first experience with a Panavision. "I'm still a great fan

of Arriflex," she says, "but I was very excited by the opportunity to use the Panavision." She used the Panaflex Gold 2, as well as the Panastar for high-speed photography. "Panavision is an incredibly reliable camera, in all types of weather. I've had situations with other cameras where the electronic boards froze up." Even though Raschke shot *The Last Good Time* in a winter storm, she suffered no down-time for equipment failure.

Despite the softer, romantic look that the Panavision is known for, Balaban and Raschke were able to lend *The Last Good Time* a crisp look. "We got what we wanted by using no filtration," she says. "When we did want a softer look, we used lighting and gels."

Sensual lighting was important to contrast the harder light of Kopple's everyday life with his fantasies. "He's a perfectionist. But in the moments when he thinks about his dead wife, he reveals this incredible, vulnerable love which he has been unable to express. His need to control ev-

erything in his life has completely stifled this love."

To distinguish between fantasy and reality, Raschke focused on crisp shapes — the angles of doors and windows in Kopple's real life. "A crisp ray of light defines its path like a laser beam," the cinematographer notes. To visually convey suppressed passion in fantasy scenes, she used a full set of CTOs and amber gels to represent the low simmering fire of his love.

In that fantasy sequence, Raschke combined character lighting with motivational lighting. "Imagine a set with a huge fireplace, a fire flickering inside it, and a black void all around it," Raschke begins. "Molly Powell, who plays Kopple's dead wife, is a beautiful young dancer, with long black hair. She's doing a striptease in front of the fire with her eyes closed, dancing to music. You can see why he doesn't want to leave his fantasy world."

Raschke used a 5K as a direct backlight coming from the same direction as the fire, but a little higher up, with full CTO gel

on it. She put the light on a dimmer so that it would fluctuate at different levels to simulate the flicker of the fire. She also added another 5K edge light on the other side, "which wrapped around and gave a three-dimensional feeling to Molly's dance." She shot the low-fill front light through a heating unit to give Powell's body a ripple effect. "It's the look you see when you have a radiator on and the light moves through the heat." On top of that, she used the crane to float overhead, doing four- to five-point moves. "In those fantasy scenes," says Raschke, "my lighting and my camera moved with the action. Everything was in motion."

Blue motivational light was used throughout the film, at night as well as during day scenes, for a cooler look. For night scenes, she chose a painterly combination of amber and blue. "During the day, I wanted to portray Kopple in a harder light, edged with blue, so that however you might feel for him, you'd always feel his loneliness."

Exterior scenes and hallway scenes were filmed in a real Brooklyn apartment building, while the interiors were built on a stage at Chelsea Stages. Steadicam operator Peter Abrahams, fresh off Spike Lee's *Crooklyn*, had to tip-toe up the stairs and through narrow halls. "If there was dialogue," says Raschke, "Peter's footsteps could sometimes make the stairs creak." The goal was to establish the proximity between Maureen Stapleton's character's upstairs apartment, where she can hear everything that goes on below in Kopple's quarters. "Peter had to do extreme tilts and 180-degree turns in barely three feet of space," Raschke recalls. "It wasn't easy to sweep down the stairs without making any noise [while] getting the emotion across, but Peter did a great job."

The ceiling of the Chelsea stage that housed the interior sets was only fourteen and a half feet high. "In some areas it went as

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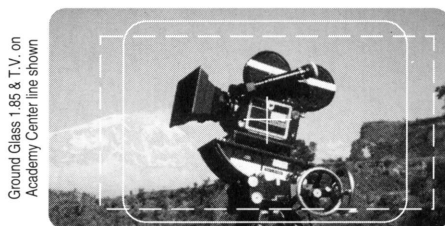
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high as eighteen feet," says Raschke, "but there were concrete beams that got in the way of lighting grids and posed a big problem." Production designer Wing Lee and Raschke solved the problem by designing a ceiling with detachable beams for the set so that lights could be attached when they were required.

Raschke used a Swiss Jib and a Panther Pegasus to do interior crane moves that gave a sense of moving from one floor to another in Kopple's apartment building. She was impressed with the Panther Pegasus. "You can set it right on track with its hydraulic crank, and you don't run the risk of bringing the track out of balance by jiggling it."

Raschke thought of her four- and five-point moves as choreography: "It was like weaving in the air. The beams and low ceilings forced us to think very carefully about the 'dance pattern' of the crane, and where the track could go in relation to the small studio." Every space had to be measured precisely by key grip Ben Wolf and operator Sam Henriquez.

Raschke used Kodak's 5293 stock to give a sense of Kopple's harsh, stark reality. "We had rich blacks and blown-out whites," she explains. "To me, 5293 is like dough. You can stretch that film in any direction because it has such wide range and fine grain. It's beautiful for any occasion; it gets great color rendition without any filtration."

Raschke also used 5298, a then-new film for night photography, which Kodak had asked her to test. She found the stock sensitive enough to give satisfactory color rendition under exposure, enabling her to reduce her night exterior lighting package. "I was pleased," says Raschke, "because with the money we'd save on lights, we could get an extra day of Steadicam or crane work."

She called Kodak's Bob Mastrianni to report her success, and asked when he could supply her with enough stock to shoot

her night scenes. "He told me it wasn't available yet. It didn't even have a name. But I begged him and he said he'd see what he could do. And sure enough, he arranged it so I had enough stock to shoot my scenes."

Mastrianni has worked with Raschke since his former days as supervisor at New York's Du Art Labs, where the cinematographer still has close ties. "Labs are crucial to a cinematographer. They can ruin you if they chew up the best part of your film and you have to re-shoot. It's important to have a good lab and a close collaboration with the timer. You must tell them what look you're going for and if you're going to intentionally under- or overexpose, so that they don't expect a normal lighting ratio."

Raschke likes to work with one set of timing lights for all of her dailies, so she can see everything in relation to it: the underexposure, the overexposure, and her subtle color manipulation. "The set of timing lights is first determined by the first two days of shooting in collaboration with a timer. Then I know where I stand with all my lighting ideas."

Kino lights helped Raschke fill in when the light source was bouncing up off the ground, and also proved "very good at surrounding in every way. Kino light portrays vulnerability well and wraps around every little curve." That was especially helpful because the film features several older actors with character-filled features.

Raschke had a lighting ratio from key to fill of two to three stops, which affected every lighting setup she had. "I would then judge how bright the rays of light coming through the window would be in relationship to the shadow detail in the background."

Raschke found the Xenon light to be an especially useful unit, and was able to employ it in new ways. "It's very power-

ful and gives you a high intensity, yet doesn't have a really clean look. There's a dark hole in the middle where the bulb is, and it actually has a squirming pattern you have to fight. It looks like worms."

Raschke used the powerful light for splashes of hard sunlight, such as the one that brightens the hospital room where Kopple's best friend is dying. "Even though he's dying," says Raschke, "there's a feeling of life in that room. It's cheerful." She used diffusion in the film only to fight the light's "worm squirm" pattern and its dark hole.


The lights and cameras were set up on a roof just outside the window of the hospital room in the wing of an actual hospital undergoing renovation. The light patterns shifted when a major snowstorm struck. "I had to have the entire crew hold onto the gear so it wouldn't blow away. We stood in the freezing wind, with snow swirling down, pumping light into the window and pretend-

ing it was a bright, sunny day."

Winter weather was also an obstacle in a POV shot where Charlotte, Olivia D'Abo's character, leaves Kopple's building and his life. The scene was supposed to take place in October, but the massive snow buildup around the building strongly suggested January. "We hired 50 people with shovels to clear the area," Raschke recalls. "It took two days. I was there with my camera, pointing out that the frame-line fell precisely 45 degrees from this tree to that car, so we wouldn't spend unnecessary time clearing space outside the frame." When the filming was completed, a large mountain of cleared snow remained, which the Brooklyn neighborhood dubbed Mount Balaban.

Raschke's next project, the ABC Afterschool Special *Notes For My Daughter*, will once again borrow from Impressionist influences. "Everything is alive in an Impressionist painting," Raschke observes. She'll draw

and design some new techniques along the lines of the camouflage net she used for a dapple effect in her last feature, *The Trust*, shot in Texas. *Notes For My Daughter* will use dappled lighting and pastel colors. "I might go to Agfa's XT 100 film stock," she says. "The quality of the grain gives it a very painterly quality."

Raschke is fascinated by all kinds of cinematic approaches, but if she had her choice, her next film would be a science-fiction or fantasy film, "something that would let me work with an entirely new world, not bound to our way of seeing light. When you're on a set, there is sun, or a fire, or a candle — some source of motivation that exists in our world. But in a new world, a world without fire or candles or sun, we're no longer bound to the traditional ways of seeing light. There could be light coming out of the ground, or from any other direction. That's one of the challenges I'd like to explore." 

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Nicholas Negroponte is a visionary with a clear bead on the digital future. As a founder and the director of the Media Laboratory at the Massachusetts Institute of Technology, Negroponte has focused his research on future forms of human communica-

nize about the programming. Yet nobody, absolutely nobody, in the high-definition television world really thinks of programming. In the early 1970s, when the Japanese looked at the next evolution of television in a totally analog world, they picked resolu-

cludes MIT by the way, because it's a dead-end proposition.

If HDTV doesn't have a chance, what does have a chance?

Negroponte: What does have a chance are the parallel efforts that have been going on in the computer industry to embed more video in computers. That will become the de facto TV set. There is no question in my mind that the TV set of the future is a PC, with or without a keyboard, with as big a screen as you want, with as many pixels as you want — and you will probably pay per view per pixel.

And a PC-based TV will adapt to any aspect ratio?

Negroponte: Absolutely. The fact that some people think that aspect ratio is an issue we can agree upon in Geneva, as if it were like figuring out what the troy ounce is or what the Europlug should be, is absolutely loony.

Why then are these companies in the Grand Alliance still spending huge amounts of money trying to invent HDTV? Why are they still pursuing higher resolution?

Negroponte: I guess the answer is threefold and no single one of [these answers] would explain it. Maybe added together they explain it. There is a certain pigheadedness. Pig-headed means you know you are wrong but you are going ahead anyway. That's one. There is a certain bit of disbelief that they might have been wrong. And there's also the point of no return. Who's going to raise their hand in the Grand Alliance now and say wait a minute, we should stop?

In the visual imaging field there has long been a goal to make digital cameras that can duplicate the aesthetics of the film image. Will the precise imaging qualities of film soon be duplicated with an electronic camera?

Negroponte: There is nothing, in principle, that you can't do with digital imaging that

Asking the Right Questions: An Interview With Nicholas Negroponte

MIT Media Lab founder offers bold predictions as he assesses the impact of digital technology and charts a course for the "brave new world" of the Internet.

by Frank Beacham

tion, from entertainment to education. In his new book, "Being Digital" (Alfred A. Knopf), Negroponte describes how digital technology will transform the way we live. He also deals with some important issues that will influence cinematography in the future. Frank Beacham recently interviewed Negroponte in New York for *American Cinematographer*.

AC: In your book you harshly attack the current efforts to establish a high-definition television standard in the United States. You write, "We are still mindlessly addressing the wrong problems, those of image quality — resolution, frame rate, and the shape of the screen. Worse, we are trying to decide once and for all on very specific numbers for each and to legislate these variables as constants." Why did HDTV go so wrong?

Negroponte: None of us goes home at night to agonize with our spouses about the picture quality of television. We ago-

nize about the programming. Yet nobody, absolutely nobody, in the high-definition television world really thinks of programming. In the early 1970s, when the Japanese looked at the next evolution of television in a totally analog world, they picked resolution — and to some degree aspect ratio — as the variables. They postulated that the move from black & white to color should be followed by higher-resolution images. In an analog world this was a logical way to scale up television; it is what the Japanese did for the next 14 years, calling it Hi-Vision. When television went from analog to digital [in the early 1990s] the decision-makers made a mistake. They carried forward with them the analog motivation of higher resolution that the Japanese started 20 years ago.

High definition isn't the issue. Being digital is the issue. What can we do [with television] in the digital world? Instead of asking that fundamental question, they took the presumed answer from the past — then insult added to injury. There was a competition and then it became the Grand Alliance. But this thing is going to die of its own weight. There's not a chance in hell it's going to survive. I'm in some sense sorry for the members of the Grand Alliance, which in-

you can do with chemistry. The look and feel of film, by definition, can be replicated digitally. There is nothing magical about using emulsions.

So why has it not yet been done?

Negroponte: Because the subtlety and nuance of film is so far out of reach right now. Film is still by far the highest, best-resolution medium we have. But that is not going to last forever. It has already given way in applications where that kind of nuance makes no difference.

I wouldn't look so much as to whether chemistry will give way to bits or whether that will happen in two years or ten years. I think the more interesting part is what kind of intelligence you put in the camera above and beyond what we currently do. Today's camera basically takes an image, slaps it on a two-dimensional plane, and throws out all the 3-D information — doesn't even know where it is. Data about focal length and other key information is discarded. It's a curious phenomenon. The cameras are blind. And I think it would be much more interesting to build cameras that aren't blind.

When will digital imaging catch up with film?

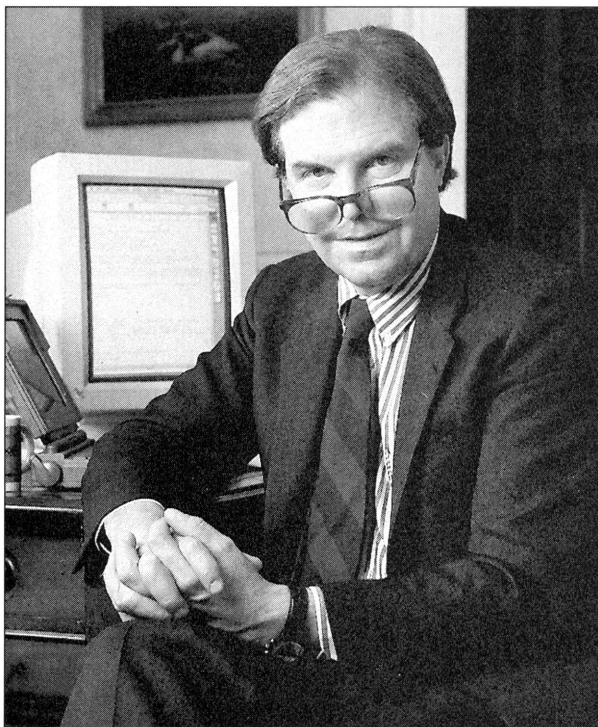
Negroponte: It's not driven by technology. If it were strictly a technological question, the answer is in a short number of years. Let's say five, plus or minus two. But it's going to be more

[driven by] when the manufacturers find the motivation to push that forward. The display technology available right now is still the bottleneck. It's not the capture; it's the display. We can capture much higher resolution than we can display.

So you think filmmaking will eventually go totally to digital imaging?

Negroponte: I think there is no question.

You've predicted a big future for the Internet and that



MIT Media Lab founder Nicholas Negroponte.

includes new opportunities for filmmakers. In your book you say that if the rate of growth of the Internet were sustained at today's levels, net users would exceed the population of the world by 2003. Bringing it in a little closer, where do see the Internet three years from now?

Negroponte: At the current rate of growth the Internet three years from now could be close to 100 million people, maybe as many as 200 million people. I've estimated a billion people by the year 2000, actually.

Can the net handle that many users?

Negroponte: It can be-

cause it's a totally distributed system. There isn't really a spine or a backbone that has to handle it. It can handle that many people and when it degrades it doesn't collapse. It's not like a bridge that breaks. It just degrades. If someone uses a lot of cinematography on their web site — with lots of bits — they will find that people won't use that site as much because they will find such a slow response. It's not as if you get no picture; you'll just get it slower.

Is the net really the information superhighway?

Negroponte: It is the information highway. The real question is, how will the private sector do commerce on it? That will drive it — commerce. Whether it's an independent filmmaker trying to sell a documentary to a niche market or whether it's someone trying to sell made-to-order shoes, commerce is the big deal. To suggest that the so-called information highway is something else that will be negotiated in Brussels is silly. It already exists. It's grown up from the grass roots.

Back to that three-year prediction.

Negroponte: There are certain things like security and privacy that still make commercialization complex. Digital cash is a complex issue. There are still a number of questions, all of which are manageable. In three years these issues will be resolved and the net will perhaps be the primary form of world commerce. If not three years it will be four years. But it's not 20 years.

We are starting to see telephony and the transmission of video on the net. How will these uses affect the established order?

Negroponte: That opens a bag of worms. When people start using it for telephony and for video — all these things are sort of thumbing their nose at the bigger companies. Whether that good or bad doesn't really matter. It's going to change.

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So you are saying the same net will eventually be used for all of these things?

Negroponte: Absolutely. And the cinematography community will enjoy an extraordinary new marketplace. I have a younger brother who is a documentary filmmaker. Right now what he has to do to get his documentary films out is appalling. He cannot get the audience physically to one place.

So you mean your brother could deliver his documentaries directly to viewers over the Internet.

Negroponte: Absolutely.

As the society gets more visually literate, do you see the visual skills of telling a story — those of the cinematographer — becoming more valued or more commonplace, such as a skill like reading?

Negroponte: Reading is a common ability but writing isn't. Just because we read well doesn't mean we write well. Narrative is not going away. The interest in expressive media and understanding story and so on is not going away at all. The niche markets created by the Internet will create a huge pool of customers for that kind of material. It's not as if people are being put out of business; there's going to be an increase in demand.

This next question is about resistance to — or even fear of — computers and digital technology. I suspect that many filmmakers — like others who have spent their lives perfecting a complex craft — really don't want to enter the new arena of digital technology. They are doing just fine where they are, thank you. What do you say to these people?

Negroponte: The short answer is get a kid to help you. The longer answer is somewhat harder. I have more sympathy for the filmmaker because film is an art form that has long used certain tools. That is a little bit different from a reticent parent who says, "I'm not going to try to un-

derstand what my kids are learning or what they are doing." If people have been great at archery it doesn't mean they have to be good at guns. Resistance to change is natural. In this world you can be an atheist but not an agnostic. You really have to know something about it and then you can decide that you don't want to jump in. But you can't be an agnostic; you've got to understand what it's about.

Has any population in history gone through greater technological change as fast as we are experiencing now?

Negroponte: I don't think so. I think this is bigger than the printing press. And it's certainly happening more quickly.

A lot of people are going to be left behind, aren't they?

Negroponte: Yes, but it's not the rich and poor. It's generational.

So what happens when masses of people are displaced?

Negroponte: When we moved from an agrarian world to an urban, industrial world there were jobs in factories and when we moved to an information world there were jobs in offices. Now if you start doing to offices what people have done to factories — people think office automation exists. Rubbish. It doesn't exist at all. You now can walk into a factory that produces automobiles that has three human beings in it. If we completely automated offices, we'd be displacing thousands of people. Where are those people going to go? The answer has got to be some kind of cottage industry. They will have to start working at home, to become entrepreneurs. The way to do that is on the Internet.

Is this liberation?

Negroponte: It's unclear whether it's liberation. Some people will say my livelihood now really depends on my energy and my entrepreneurial ability. This is something a freelancer understands from beginning to end, but an employee doesn't.

The Sea Hawk Meets the Six-Pack

Miller spot uses classic footage from Flynn adventure to set up clever pitch for product.

by Mary Hardesty

Did you ever notice the monkey in the galley scene from the classic film *The Sea Hawk* starring Errol Flynn? Maybe not, but Miller Beer has cleverly brought him to the foreground with their new Miller Genuine Draft Beer 30-second takeoff. This time the monkey appears at one of the portholes and drops a bottle which rolls to one of the rowing men.

"The knife the forced laborers use to extricate themselves and escape [in the film] is now a bottle of beer," explains cinematographer Curtis Clark, ASC, who collaborated on the ad with first-time director Angus Wall. "The challenge was to link Errol Flynn and the original actors with our new guy. Instead of the knife, he's handed the bottle of beer."

To make it appear as if Flynn was actually handed a brew, Clark used motion control and a bottle on a rig to match the actions needed to composite the bottle into the late actor's hand.

Light, angles and perspective proved to be the biggest worries during the five-day shoot at Renmar Studios in Los Angeles, on a set constructed to match the 1940s set. "We had the original footage with us during the entire shoot, so we were able to estimate the perspective needed," Clark recalls. Although he didn't have access to continuity reports of the original footage, he was able to make use of video assist to help him match footage. "We would feed in the original scene and superimpose our bottle over the point where Flynn's hand

was, which allowed us to quickly see if the bottle was at the correct perspective," explains Clark, who was given one day to shoot two such scenes.

To capture the original Forties look, Clark chose Kodak Double X black & white stock. "We took the closest source of the film — in this case a D-1 transfer from Turner Broadcasting's library — and used it on the Cineon at Pacific Ocean Post to replicate the look

"I'm a great believer in the accumulation of details to make it feel right to the viewer at a subliminal level." — Curtis Clarke, ASC

of the original film grain, which was coarser than today's stock," explains Clark. "Because we didn't know the exact steps the filmmakers went through to create the original footage, we had to guess the grain sharpness and diffusion levels."

To further add to the authentic period feel, Clark and the director decided to recreate the shooting style of the period using the same lighting techniques and lenses. Fortunately, Clark had found a set of old Cooke lenses that had been rehoused when he was shooting the King Kong Eveready Battery spot [AC March '94], so he was able to use that gained knowledge to save time and accomplish his lighting tests in only one day.

"From my work on the King Kong spot I knew we needed to use tungsten lighting and traditional studio lamps. The lighting styles used in those days

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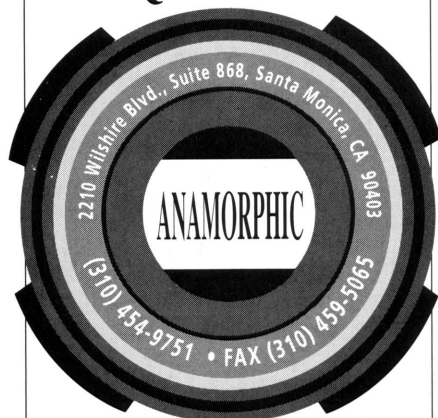
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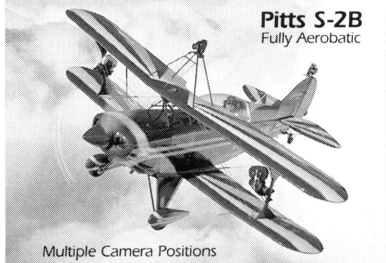
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were, in many respects, old-fashioned," observes Clark, who notes that many older features lack lighting continuity. "They're not anything like what we would do today. The trick is to always refer back to the reality of the original film and not do what you would normally do to improve the lighting. Making it nicer is not the point: you want your work to blend in with the old footage."

For the moment when Flynn supposedly pulls the beer across his chest, the filmmakers used a body double. Clark recalls with amusement how he and the director had to closely examine the sheen of the body double's chest hair in an effort to match the original footage. "I'm a great believer in the accumulation of details to make it feel right to the viewer at a subliminal level," states Clark.

Clark followed the footage into post to ensure that his attention to detail was preserved. "To tell you the truth, I don't know if we needed to match the grain as painstakingly as we did, because people may not notice. But my contention is that by paying attention to the details, we can make it so seamless as to create the illusion that the scenes we shot were really shot at the time of the film."

The team was able to seamlessly match the new, cleaner footage to the older footage, which had many abrasions. "If there was an abrasion in the original scene, instead of cutting abruptly to the new footage, the abrasion was generated onto the new image and slowly faded out across the cut," explains Clark. "We wanted people to fully accept that these shots could have been outtakes that were just found and put back in."

In an additional twist to the story, the characters never leave their black & white world, even as they escape onto the deck of a full-color modern-day cruise liner. This was accomplished by shooting everything in color and then selectively removing the color in post.

"Instead of doing modern colors for that scene, we wanted to use a 1950s Technicolor look," says Clark. "To get that saturated dye transfer color, I ended up using Kodak's basic 5298 stock, but I used a different set of rehoused old Cooke lenses at the highest end of their output." He points out that optical characteristics and performance levels, in

terms of sharpness and contrast, have greatly improved over the years.

Taking the experiment one step further, the original footage borrows something back from the new footage. "We shot the new end scene with the trademark Miller snow and, in post, added snow to the original *Sea Hawk* footage so they would match," Clark relates.

And, of course, the spot's ending features the traditional Miller girls, only this time one of them has the black & white monkey in her arms.

The spot's post requirements served as a course in digital compositing, an area Clark encourages other cinema-

**"We can only
keep control if we
understand how
the process works."**

tographers to learn more about. He steadfastly maintains that cinematographers must come to terms with the new digital tools as they become increasingly commonplace. "At some point the limitations are only those of the imagination," observes Clark. "Certainly in the world of commercials, a lot of our work is going to be finished in the digital domain. How we can control our images as they pass through that process becomes vitally important, but we can only [keep control] if we understand how the process works."

Clark believes that his increasing knowledge of the post process has helped him to better anticipate how his work will turn out and to be more confident that he can control the final image. He says that he constantly strives to avoid what he has termed the "FUD Factors" — fear, uncertainty and doubt. "It's very easy to get lost in this technological maze, and you have to focus very carefully on the original concept," he says. "Technology on the cutting edge offers us great possibilities, but if we aren't careful, it can also lacerate and destroy the very thing it sets out to serve."



Post and Production Continue to Blend

compiled by Marji Rhea

Video Editor

Videonics Video Palette is an all-in-one TBC, video analyzer, processor, enhancer and color corrector that delivers images that meet both the RS-170A broadcast time base standard and the CCIR-601 digitization standard, with 20MHz sampling and 26-bit video (10-bit luminance).

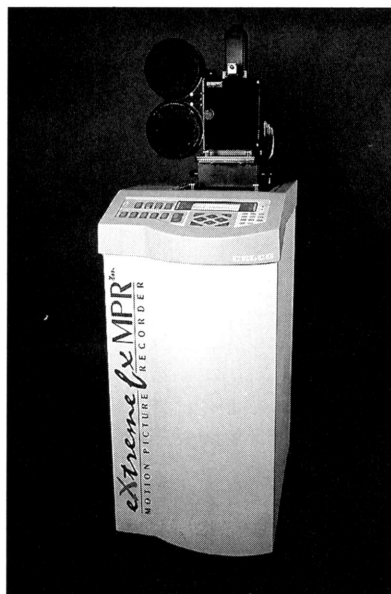
The Video Palette takes the guesswork out of key video adjustments while offering flexibility and creativity in video editing. A series of on-screen analyzers measure key video signal parameters and let users see exactly which parameters of the video image need adjustment. At the touch of a button, the unit then automatically adjusts the signal to comply with the broadcast standards for each parameter. Because the analyzer and processor functions are fully integrated, adjustments are made with far greater precision than is possible with the naked eye.

As a creative tool, the Video Palette offers a broad range of special effects (such as strobe, negative, posterization and freeze-frame), which can be used singly or in combinations. A special "histogram" display lets users see the precise distribution of light and dark values, decide what levels are optimum, and adjust the picture accordingly. Users may also adjust image sharpness and reduce picture noise, using the built-in digital noise processor and enhancer. A built-in split-screen function lets users compare before and after images.

The Palette's time base corrector/synchronizer is a full-frame (dual field) infinite window time base corrector that constantly locks the signal to an internally generated time base that meets RS-170 specifications. The unit's vector display shows color phase and amplitude, allowing easy adjustment of color hue and saturation. A special wave-

form display shows the output sync, burst, and video levels, and allows easy adjustment of all brightness-related parameters. The color processor offers full control over color, including the ability to repair white balance problems, as well as to control fine adjustments of primary colors, boosting or reducing color components in the image.

For information: Videonics, 1370 Dell Ave., Campbell, CA 95008-4859, (408) 866-8300, FAX (408) 866-4859.



Digital Motion Picture Recorder

Celco's Extreme FX MPR digital motion picture film recorder is optimized to run motion picture film, and features long-term exposure stability, state-of-the-art resolution, fast output speed, and full dynamic range. The Extreme FX MPR has been used to output special effects for feature films such as *True Lies*, *Drop Zone*, and *Outbreak*.

Celco combines high resolution (8192 to 65,536 lines addressable

resolution) with the fast image recording speed: less than 12 seconds for 35mm cine frame, and less than 25 seconds for 35mm graphics slide.

The Celco Extreme FX digital film lab addresses any resolution, including 1K and Photo-CD 3K format. The unit optimizes plotting speed to virtually any film stock (35mm to 8" X 10") including photographic paper. The unit's internal microprocessor enables the image recoder to automatically recognize a change in camera module and set the appropriate format selected from the 48 available formats.

For information: Celco Pacific, 1150 E. Eighth Street, Upland, CA 91786, (909) 985-9869, FAX (909) 982-2464.

Animation Upgrade

New features of Alias Research's Alias Animator Version 6.0 include the Alias Real-World Camera Lens package, faster interactive shading, enhanced Digital OptiF/X, and tools previously available only on the high-end Alias PowerAnimator package.

The Alias Real-World Camera Lens package merges computer-generated imagery with live-action footage. The package allows artists to accurately match the characteristics of their virtual lenses to real-world camera lenses, via an intuitive, cinematographer-level interface that provides control over aspects such as focal length, f/stop, lens focus, field-of-view, and film format. The package also provides a library of pre-defined lenses based on standard optical formulas for real-world lenses.

Interactive real-time shading is now more than two times faster, offering faster visual feedback and responsiveness for computer artists. The speed-up has been achieved via a new Fast Options mode for interactive shading that optimizes drawing operations for the dedicated 3-D hardware capabilities of

Silicon Graphics workstations.

The new Tri-Sample Motion Blur tool evaluates object locations at three separate times during a shutter exposure — Shutter Open, Shutter Mid, and Shutter Close — to improve the sampling of motion blur. The Tri-Sampling approach improves the realism of blurred objects as they move along arcs, for example.

Lens Flare now exists as its own type of glow for every light. As with all glow effects, a wide range of controls can be applied to lens flare, including intensity, number, and shape and size of lens flare elements. For example, circular ramp textures can be used to create colorful rainbow flare effects, and the shape of the lens flare can be controlled by creating a textured image with the digital shape.

The new Freeform Fillets tools are used to blend or join seams between connected NURBS surfaces, or create smoothly rounded corners for a high degree of model realism. Stages are used to rapidly switch between different characters, sets or lighting stages, using information contained on multiple wirefiles, texture files and lighting files to create unique working environments without requiring the merging of all information into a single file. Animation Sweep is used to create objects from user-defined animation curves. For example, a user can create a spiraling tube by animating the motion of a circle primitive.

For information: Alias Research Inc., 110 Richmond St. East, Toronto, Canada M5C 1P1, (416) 362-9181.

Nonlinear Editing Products Line

D/Vision Systems' new line of broadcast quality nonlinear editing products, running under Windows NT, supports 32-bit open architecture standards. Using Intel's Pentium PCI processors, the products feature drag and drop editing, storyboarding, unlimited audio and video tracks, 60 fields/sec, 24 fps film capture, unlimited redo and undo, and real-time special effects.

Included in the family of products will be an integrated turnkey system with 60 fps online, full CCIR-601 resolution. Online software packages for professional video editors offer 60 fields

Beta SP quality, with unlimited audio tracks, and support multiple compression algorithms including Motion-JPEG. Stand-alone boards and software packages for offline film editors are equipped for 24 fps and film conforming, delivering Beta SP quality and 24 tracks of CD-quality sound.

For information: D/Vision, (312) 372-0018.

Animation Support for QuickDraw

Electric Image Inc. has announced its support of Apple Computer's QuickDraw 3D API and metafile format in their flagship product, ElectricImage Animation System. ElectricImage will use the QuickDraw 3D API to provide real-time rendered views of animation projects as they are being created. The increased feedback to the animator will reduce the amount of time required to set up animations. Ultimately, the animator will be able to create better animations in less time. The metafile format will be added to the long list of 3-D file formats already supported within ElectricImage.

For information: 117 East Colorado Blvd., Suite 300, Pasadena, CA 91105, (818) 577-1627, FAX (818) 577-2426.

Storyboard Software

PowerProduction Software's StoryBoard Artist software has pre-drawn characters that can be oriented in various actions. The program offers elements in three viewing elevations (high, eye level and low) in addition to various actions and angles. Custom libraries can also be created from imported or drawn images. Graphics can be zoomed in or out, moved, rotated, flipped and layered along with built-in props and interior and exterior locations.

Desktop animators, art directors, media creators, filmmakers and videographers can create rough sketches as well as final visual outlines. The slide show feature with between-frame transitions and sound tracks (for adding music, sound effects or narration) is a perfect tool for showing onscreen demos of visual ideas. Objects, frames or project can be exported to PICT files or QuickTime movies.

Both StoryBoard Quick and StoryBoard Artist create frames in preset aspect ratios of 35mm slides, television,

computer screens, feature films, and widescreen.

Additional features include the ability to customize frame sizes and select various frame borders; turn objects into buttons linking frames to each other; customize formats at one to three hundred frames per page; and simulate optical zooms, pans, and tilts using the camera mode.

Storyboard Artist for Macintosh runs on System 7 or better, with at least 4 Megs RAM. Both StoryBoard Quick and StoryBoard Artist run native on PowerMacs.

For information: Power Production Software, (310) 937-4411, FAX (310) 937-4416.

Disk Arrays

Falcon Systems, an integrator and developer of peripherals for UNIX platforms, including Silicon Graphics, has unveiled its new product line, developed specifically for film, video animation and computer graphics applications.

The Falcon Reeltime Arrays were designed for use on Onyx systems and achieve up to 45MB per second sustained. Applications include real-time compositing and online special effects. The arrays are compatible with both Discreet Logic's Flame and Kodak's Cineon software. The Falcon Reeltime includes a Vault C enclosure with 8 fast wide differential drive capacity. With performance at 45MB per second sustained transfer rate, the Falcon Reeltime allows the user to manipulate 12-32 minutes of real-time video (24GB-64GB configurations).

The Maltese Falcon Arrays were designed for use on the Challenge Video Server and attain up to 30MB per second sustained transfer rate. Applications include rendering, nonlinear and online editing. The system is compatible with Pixar RenderMan and Softimage Offline and Online software.

The Maltese Falcon comes with the Maltese enclosure with 8 fast wide differential drive capacity. The Maltese enclosure features the same footprint and color as the Challenge S.

The Falcon AV was developed for use with the Indigo2 for use in 3-D animation and non-real-time compositing. It is compatible with Power Animator, Advanced Visualizer, Matado, Flint, Eddie and Composer.

The Falcon AV comes in 8GB configuration for four minutes of digital video with a sustained transfer rate of 12MB per second and 16GB configuration for eight minutes of digital video with an 18MB per second sustained transfer rate.

For information: Falcon Systems, (800) 326-1002.

Video Enhancement Technology

Rho Partners' OptiVision is a digital process that limits and in some cases reverses video image degradation, improving the aesthetics of video and creating a sharper, film-like image. The process does not require any additional equipment or change in existing post-production and broadcast hardware. In the areas of video-on-demand and interactive home video, OptiVision improves the quality of a compressed video signal. OptiVision limits the degradation that occurs in the film to video transfer, and in computer-generated images reduces the effect of pixelization. OptiVision also reduces the memory storage requirements for digital compression technologies.

OptiVision performs in real time a sophisticated convolution algorithm for every pixel in the image by analyzing the surrounding neighborhood up to 64% of the image size. It reduces the data storage requirement in compression protocols by de-emphasizing unwanted high spatial frequencies and noise. The process can make subtle details more significant so they are not lost due to quantizing resolution limitations and/or compression of the image. OptiVision can decrease pixelization by reducing overall dynamic range and quantization requirements.

Where it is impossible to control lighting conditions, OptiVision effectively fills in shadows and reduces glare by suppressing large frequency areas. It can simultaneously tone down overbright regions, bring up dark regions and enhance (stretch) fine detail. The viewer can then see what was previously obscured, i.e., a football player running into glare, or a gun hidden in the shadowy recesses of a car at night.

In the telecine process, OptiVision overcomes video's inherent low contrast ratio. With dark scenes, OptiVision can bring out detail that

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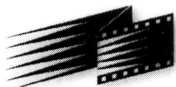
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Editing Software Extension

D/Vision Pro users will appreciate the release of Easyreel software, a menu-driven add-on program that offers new features to the popular PC-based video editing system. Online EDLs created on D/Vision Pro can only use a three-digit number to identify each source tape; power users with source tapes from numerous shoots and film transfers have asked for a more intuitive system; such a system would be particularly helpful when wrong tape numbers pop up during a costly online session. Easyreel removes this limitation by allowing up to six alphanumeric characters to identify source tapes. The program integrates seamlessly with D/Vision EDLs and preserves the accuracy that the D/Vision is known for. Easyreel automatically creates a reel summary for each online EDL created. The reel summary is a complete and accurate listing of source tapes needed for the online edit session. The summary can be printed out, or copied into a computer database. More upgrades are being added on as well, including time code output, automatic DAT backup scripting, auto E-mem support for GVG editors and switchers, additional scenes log capabilities, and pre-built graphic backgrounds.

For information: ArmStrong Software, (800) 299-5494.

Video Workstation Upgrade

Pinnacle Systems' new version of software for its Prizm Video Workstation offers software support for the 16:9 screen format. New shapes for Prizm's popular Refractor real-time interactive curvilinear option are also available. Shapes include cylinder and radial warps, exploding tiles, magnifying glass and melt-down. Several new setup and operational features are included, with D-1/composite input selection, switcher peripheral mode, multi-spine capability, and edge alignment for matching transformations into irregularly-shaped trapezoids. Prizm is also offering its new serial 601 option for digital I/O.

The Prizm Video Workstation,

an open architecture, software-based digital effects system, offers a full range of powerful tools, including 3-D image manipulations, montage, still store, digital dual channel combiner, serial digital I/O and flying linear keys. Prizm has 4:2:2 digital image processing and full bandwidth key output, and is available in NTSC, PAL and component standards. The next step in Prizm's upgrade path, Refractor, offers the added function of single pass warps, two-sided page turns, rolls, ripples, splash, and flaps. Wave size, rotation, amplitude and aspect control can be easily adjusted. Dynamic highlights and shading add exceptional realism to any Refractor shape.

Prizm's DVEator integrates 3-D animation with digital effects. With a single pass, DVEator maps live video onto user-created animated models, or users can combine paint graphics and live video with variable light sources, intensity variations and shadows for vivid realism. Offline effects creation is enabled by the DVEator Creation Station, which uses Crystal Graphics Topas 3-D animation/modeling software.

For information: Pinnacle Systems, (800) 4PINNACLE.

MPEG Encoding System

The Compressionist by Minerva Systems is the first MPEG encoding system to enable a human-assisted approach to the video compression process. Video professionals can use the Compressionist's application software tools to control its powerful encoding engine and improve video quality based on their artistic judgments. The Compressionist is designed for video postproduction houses, film studios, television networks, and cable and telephone companies that need to create high-quality compressed video for delivery on CDs or via video servers.

The Compressionist is an integrated system consisting of the Minerva encoding engine, a Macintosh-based host system, and the MPEGmaker application software. The real-time, scalable video processing engine is capable of digital or analog video input, high-quality audio capture, and MPEG audio and video encoding and multiplexing at bit rates of up to 4 megabits per second. The platform can simultaneously encode and decode audio and video, so an operator can instantly "preview" the results of the

MPEG encoding process and adjust the engine parameters based on that visual feedback. The Compressionist's scalable architecture supports future field upgrades to video pre-processing and MPEG-2, so Compressionist customers will protect their initial investment and still take advantage of the latest video compression technology.

The Compressionist's operator directly controls the MPEG encoding engine via easy-to-use application software tools. Inverse telecine, for example, is a vital tool for maximizing the compression quality of film-based video. The operator uses inverse telecine to selectively extract redundant fields and ensure that the video being encoded is true to the film original. Other Compressionist tools include the ability to insert intra-coded I-frames at key junctures, such as scene changes, to improve the quality of the first frame of a new scene, and integration with complementary noise reduction and video decimation units. The operator can selectively apply these and other powerful tools, view the results, and adjust parameters based on visual feedback. This iterative, human-assisted encoding process results in the best quality compressed video.

For information: Minerva Systems, 2933 Bunker Hill Lane, Suite 202, Santa Clara, CA 95054, (408) 970-1780, FAX (408) 982-9877.

New Compression Scheme

The Houston Advanced Research Center (HARC) has developed a compression technology offering major improvements over techniques now available for pictures, film and video. HARC-C, a wavelet-based algorithm software, is capable of compacting an image at a variable compression ratio depending on the application. While other methods may achieve comparable reductions, HARC-C does so while maintaining the clarity and defining characteristics of the original image.

HARC-C exceeds the current industry standards, JPEG and MPEG, in performance and quality for both still and motion pictures. It can compress still images up to 300 times depending on the application — significantly reducing the amount of computer memory or disk space required to handle and store digital images.

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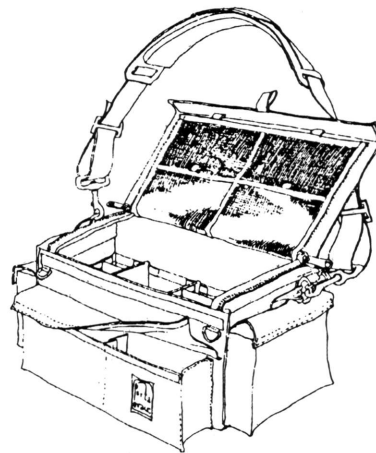
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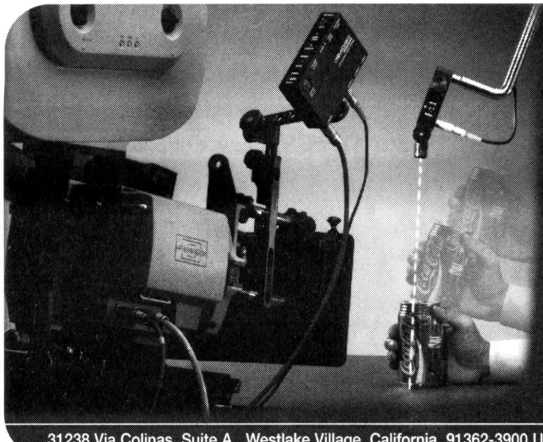
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HARC-C at a compression ratio of 300:1 can reduce a file size of 2.4mb to 8 kb. It also requires little or no specialized equipment (e.g., computer boards and chips) — even movies compressed with HARC-C can be viewed on personal computers using only HARC-C software. HARC-C has also improved on tiling, a standard technique used to break large pictures into smaller sections that are then compressed and reassembled.

For information: Houston Advanced Research Center, 4800 Research Forest Drive, The Woodlands, TX 77381, 9713) 367-1348.

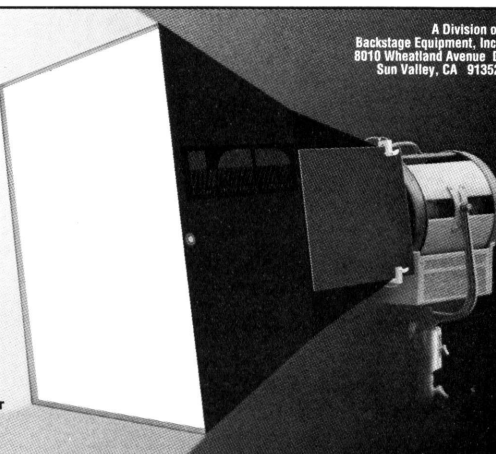
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Scene Stealer Applications

Dubner International's Scene Stealer program for logging, archiving and automatic cut detection has added a new transcription application for editing with audio cues. Standard Scene Stealer features that are useful for transcription include copying text and pictures to the Windows Clipboard for use in other documents, adding cuts along the audio track to organize data, and archiving video/audio clips.

Additional new features to the DOS and Windows standard software versions include the ability to archive audio with any frame or scene; read Hi8 Visca protocol; interface with the PreVue Technology time code reader board used by D/Vision; and import a series of pictures to Access and Executive Librarian database programs. The Windows version can now print pictures from the storyboard reel; export the EDL to an Avid Media Composer; activate a foot switch for audio play; change size and position of the text box; and set more defaults to customize setup.

For information: Dubner International, 13 Westervelt Place, Westwood, NJ 07675, (201) 664-6434, FAX (201) 358-9377.

Editing Controllers

Videomedia has added to its control and synchronization expertise by releasing Virtual Device Interface control of the Pinnacle Alladin, and V-LAN control of Digital Disk Recorders, to its new Oz-PCE (Production Control Environment). This allows users to edit video productions in an environment of VTRs, DDRs, DATs, VDIs, audio mixers and switchers. Storyboard list organization can be performed by dragging and dropping any clip

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within a BIN, or moving a clip to a new BIN or into the EDL for online editing.

The VDI for Alladin provides direct control with integration beyond the common RS-422 control. The OZ-PCE control panels provide all the tools for specifying transition type, selecting DVE transitions and time-line duration, selecting and loading of graphics to G1 and G2; as well as independent source selection for both layer 1 & 2 for DVE and overlay graphics, and Play button to rehearse effects or Effect Jog for stepping through the time line and reverse playing of effects. The Alladin program can also be called from the Alladin icon on the toolbar for customizing new effects.

The Oz-PCE graphical interface has the look and feel of a high-end workstation. The advanced Windows tool bar will show the icon of the Alladin application, so that a user can easily switch between screens. Control panels along the side of the screen allow instant viewing of all the settings and status of the controlled devices. Multiple open EDLs can be performed to quickly move, copy, insert or delete events. Multiple event blocks can also be dragged and dropped to copy or move sequences. Undo and Redo will retrieve any changes in the EDL and restore original data from up to 50 layers.

The new Pro III jog/shuttle edit keyboard has two jog/shuttle/key clusters, one for the source side and one for the record side. The Pro III keyboard was derived from Videomedia's popular VLC-32 editing system. The multiple recorder capability allows users to split off the audio, create other format masters, or simultaneously record to a DDR. The current release controls up to four sources and two recorders, but will be extended by the year's end. These six online recorders can be selected from up to 31 devices networked with the V-LAN Control and Synchronization Network. The switcher can be selected from any number of switchers on the V-LAN based network.

Videomedia has also expanded its line of VLX modules that can be integrated into the 5.25" drive bay of a PC. The new line offers multiple configurations and is compatible with all currently installed units. The basic configuration can be a single VLX-i unit that can either be a transmitter or a serial receiver, a parallel receiver, or a 16 GPI

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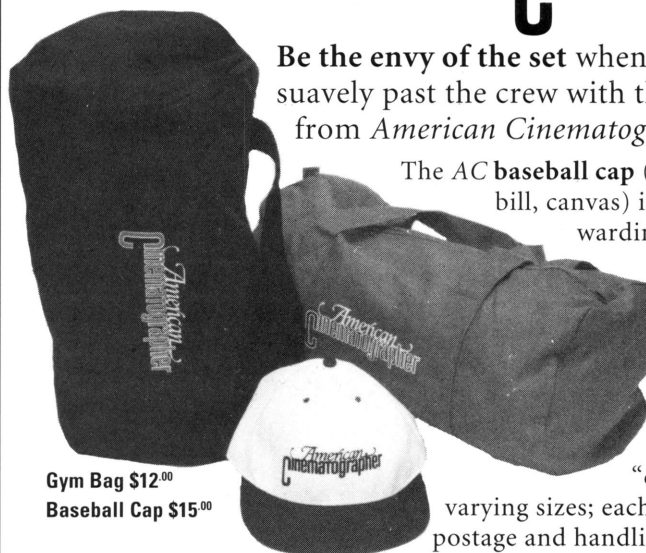
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unit; the personality of which can be downloaded from a V-LAN driver utility program direct from a PC.

For information: Videomedia, 175 Lewis Road, San Jose, CA 95111, (408) 227-9977, FAX (408) 227-6707.

Ultimatte System

Ultimatte's new Ultimatte-8 digital 4:4:4 video image compositing system features user selectable inputs (foreground, background) and output (FG and BG) configuration setups. Both inputs and the output can be individually configured to serial 4:2:2 (CCIR-60) or (Dual Link) serial 4:4:4 (SMPTE RP-175). In the 4:2:2 configuration, link B (second channel of 4:4:4) can be used as a second 4:2:2 input when selected by the operator. In the 4:4:4 configuration, input and output formats can be individually set by the operator to be either Y, Cb, Cr or G, B, R.

In addition to matting from blue, green and red backing colors, the Ultimatte-8 can perform fully additive matting using black and white backing colors. A fully additive type of compositing allows the Ultimatte-8 to retain all the fine detail present in the foreground scene, in addition to motion blurs and out-of-focus soft transitions.

The Ultimatte-8 incorporates several methods of solving screen brightness and color tracking problems. The first of these is an improved version of Screen Correction, which uses a reference frame to correct most backing imperfections. With a built-in frame store, screen correction is further simplified. This frame store could also be used to hold a frame of background scene, or a frame of external matte (garbage matte).

For information: Ultimatte Corporation, 20554 Plummer St., Chatsworth, CA 91311, (818) 993-8007, FAX (818) 993-3762.

Nonlinear Digital Video Editing System

Interactive Images' Plum nonlinear digital video editing system is a plug 'n' play, PC-based product boasting broadcast-quality video — CCIR-601 video sampling at 720 X 480 NTSC or 720 X 576 PAL at 59.94/60 fields/second, with a proprietary design scheme that allows an extremely low compression ratio for virtually zero visual artifacts.

Plum's design has an onboard

rendering engine that reduces rendering time by approximately 95%, compared to more conventional cards. Using the super-fast PCI bus, Plum supports a data burst rate of up to 132 MB/second and sustained compressed frame sizes of 125 KB without expensive RAID disk arrays. Wide industry support of PCI bus architecture eliminates user worries of obsolescence with future generations of PCs.

The system's plug 'n' play configuration simplifies installation with no need for jumpers and dip switches, and an open-architecture design allows expansion of the system with off-the-shelf components.

Plum is bundled with a high-quality audio card, a fast SCSI-2 card, and Adobe Premiere 4.0 editing software and is an easy-to-use, Windows-based system. The system will be available for Macintosh later this year.

For information: Interactive Images, 2025 Research Parkway, Suite C, Colorado Springs, CO 80920, (719) 598-3894, FAX (719) 594-0925.

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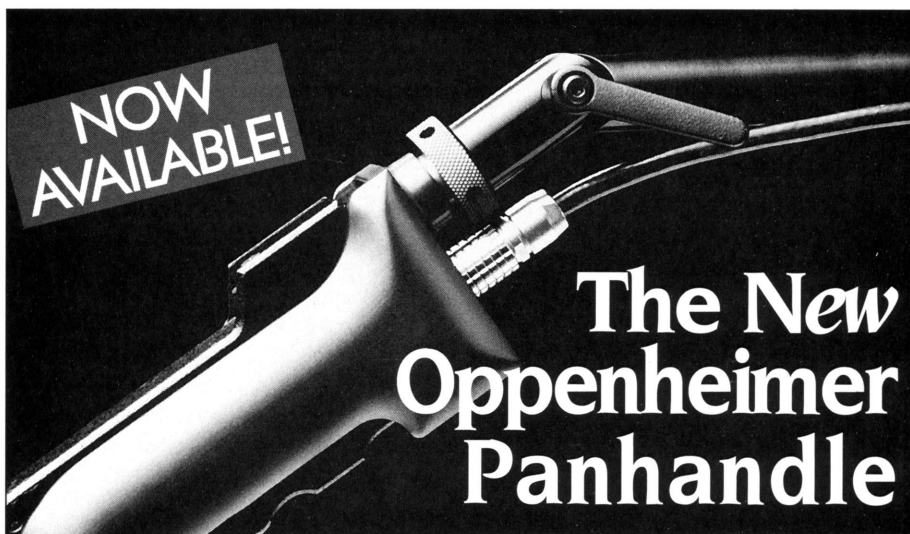
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NYC Develops Multiple Personalities in *Search and Destroy*

by Brooke Comer

David Salle's *Search and Destroy*, photographed by Bobby Bukowski and Mike Spiller for October Films, makes good use of New York locations, using city locales to double for Dallas, Texas and Boca Raton, Florida. When Dan Lupovitz, who produced along with Ruth Charny and Elie Cohn, acquired the rights to Howard Korder's play, he felt that the quirky dialogue and unsavory characters would be enhanced by a New York location, while executive producer Martin Scorsese compared the project to one of his own New York films, *After Hours*.

Search and Destroy follows Martin Markheim (Griffin Dunne) on an odyssey from Boca Raton to Dallas to Manhattan. Along the way, he meets up with Dr. Luther Waxling (Dennis Hopper), a self-help personality on cable TV, and Waxling's receptionist Marie (Ileana Douglas), with whom he travels to New York.

Search and Destroy is Salle's directorial debut. His filmmaking expertise evolved in tandem with his career as an artist. A leading figure in the contemporary art world, he is known for using movie themes and images in his art. In the Seventies, Salle produced videos and performance art, and worked with choreographer Karole Armitage and Mikhail Baryshnikov.

"The budget," says Salle, who names a \$1.5 million figure, "required us to stay at home. We couldn't afford to fly around the country putting people up in hotels. Besides," he adds, "I love working in New York."

Producer Ruth Charny pointed out that even keeping the project in one area was tough given the budget limitations. "The dream script for a low-budget producer has a small cast and few locations, like *The Return of the Secaucus Seven*," she notes. "That film took place over a short period of time so there weren't many changes. The worst in terms of expense on a film is a company

move. The problem with this film was that it is about one man's journey. We had to show several locations in several states without being able to actually go everywhere."

Charny credits location scout Nancy Roth for her tireless work with production designer Robin Standefer. "They found locations that went outside the boundaries of the city, not necessarily the physical boundaries, but the aesthetic boundaries." Most location scouts search for New York locations that bring out a flavor indigenous to the city, but Roth and Standefer were looking for Boca Raton and Dallas in New York.

For an airport scene, "we ended up using a private hangar section in a Westchester airport," Charny recalls. Another airport location was available adjacent to JFK, "but we could only shoot there during nights, which would have thrown off the whole week, because if you shoot one night, you can't expect people to work the next day. You have to keep shooting nights until the next week-end. Unless you have to shoot night-for-night scenes, night shoots are something to avoid."

Martin's "Boca Raton" house was actually a landmark home in Westchester. "The house looked like it could have been in Florida, because it had an Art Deco look," says Charny. That house also doubled for the home of another character, Ron (John Turturro) and provided a squash court for a murder scene.

"The murder scene was supposed to take place in a greenhouse," Charny reveals. "But it was too expensive to find one. We saved money by staying in one place for multiple scenes." It was Salle's idea to try using the all-white environment of the squash court for the murder. "White walls are something you want to avoid in a film," he points out, "but it worked. It's a stun-

ning scene."

Salle's artistic sensibilities helped the filmmakers be more flexible in terms of less-than-literal landscapes. "The film has little transitional material," Charny notes. "You don't see people driving places, getting to a location. They just turn up there. There aren't windows. It's the most windowless location I've ever seen except for a prison movie. People may have problems with that aspect of the film and find it disorienting, but I think it's one of the film's strengths. David comes from a background as a painter, and he has a less literal sense of transition."

Salle is also no slave to verisimilitude. "David's sense of locations and space and characters are very theatrical," says Charny. One scene takes place in a tailor shop, "which looks like no tailor shop you've ever been in." Similarly, a karaoke bar scene is not a New York karaoke bar so much as a David Salle karaoke bar.

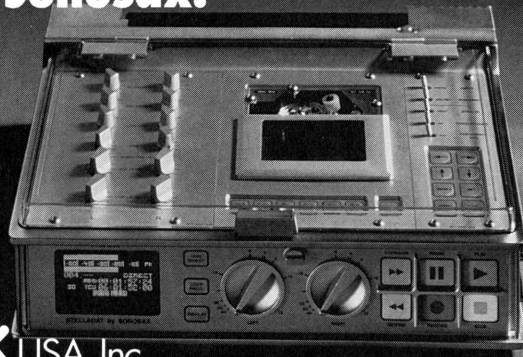
Texas was portrayed primarily in the Waxling Institute, where Dennis Hopper's character broadcasts his cable show, and it, too, doesn't look like the workplace of an evangelist preacher. "David wasn't trying to attempt that kind of realism," Charny maintains. "He wanted to emphasize the allegorical sense of story, the man's journey to some form of self realization, to a simple achievement, to success. Martin goes out in search of significance."

Adding another element of surrealism to the production was a scene shot at night in the Bronx, where the character Kim (Christopher Walken) is killed. "We were fighting sunrise," Charny remembers, "which is a big problem in a night scene because it ends your shooting day, and as a result we couldn't get all of our shots completed. We went back to the area a few weeks later to finish, and Chris wouldn't do the scene unless he had a gun, which he'd been holding before, even though the gun wasn't visible in this scene. He felt more comfortable holding it." The prop department was sent out to find a gun, but it was late on a Saturday night, and the usual prop sources were closed. "There we were, in the middle of a park in the Bronx, which must have been the gun center of the world, and we couldn't find a gun," Charny says with a laugh. Finally, a prop person who specializes in firearms was located, and Walken got his gun. ✎

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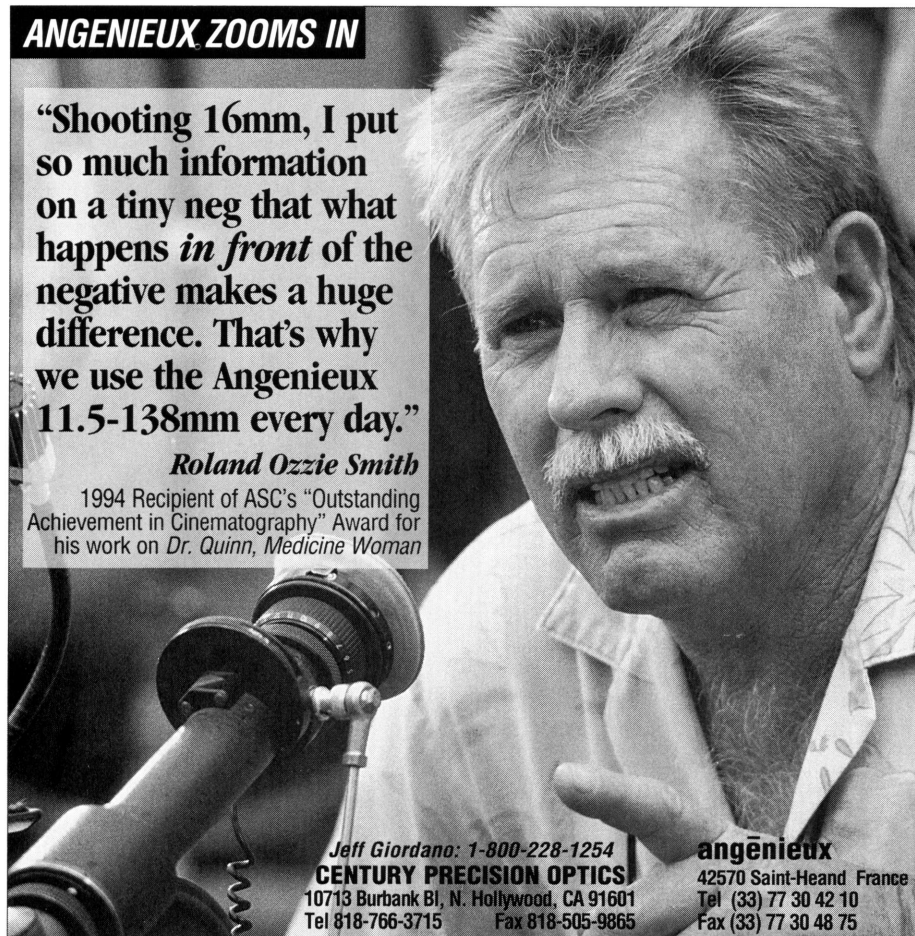


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Books in Review

by George Turner

What an Art Director Does

by Ward Preston
Silman-James Press, paper,
190 pps., \$18.75

In 1916, when "art director" was a newly recognized title in the movie business, an article in *Photoplay* stated that the profession was "here to stay" and that a qualified art director should be "a well-read and much-traveled gentleman who has broken bread in the poor man's hovel and wine glasses in the rich man's palace." In *What an Art Director Does*, Ward Preston adds that "Fortunately, this criteria never found its way into the union bylaws."

After stints as an architect, draftsman, set designer and theme park designer, the author served as an art director on such major films as *The Towering Inferno* (for which he received an Academy nomination), *Airplane!* and *Purple Rain*. Although a number of good books on the subject have been published through the years, most deal with personalities and history more than the actual craft of art direction. This one is as down-to-earth as its frank title suggests and provides a practical guide to the actual duties of the job.

After a brief historical note, Preston offers a chapter telling what the studio art departments were like. Choking down a nostalgic lump, he then launches into the realities of today, such as starting from scratch on independent productions. Subsequent chapters focus on necessary training, research and clearances, breakdowns ("script, nervous and Central Avenue"), cost estimating, design and presentation, set construction, set decoration, and more. The writing is as insightful and clear as one could ask for and is leavened with appropriate humor.

Fearing the Dark

by Edmund G. Bansak
McFarland, library binding,
572 pps., \$45

Val Lewton was a movie producer in the true meaning of the term, not

a figurehead or a money man or a relative of a studio executive. He was one of the few whose personality was stamped more deeply on the pictures he made than those of the directors. He, more than any other, brought higher standards of taste and intelligence to the horror films of the Forties.

This is the third and most extensive book devoted entirely to Lewton. The first was Joel Siegel's *Val Lewton: the Reality of Terror* (1973), a small but admirable study of the man and his films. The second, J.P. Telotte's somewhat pretentious *Dreams of Darkness* (1985), was a search into the meanings of Lewton's films. Numerous magazine articles and chapters in books have been devoted to Lewton's career or in-depth analyses on individual productions.

Bansak has covered all bases and added a great deal of material, including up-to-date interviews with members of Lewton's family, friends and co-workers. There are also separate chapters on his key directors, Jacques Tourneur, Mark Robson and Robert Wise, and an interesting wrap-up of later films that reflect Lewton's influence.

It's a pleasure to report that the author acknowledges the vital contributions made by cinematographers, especially Nicholas Musuraca, ASC, to the realization of a recognizable Lewton style. It's also gratifying that Lewton's last production, *Apache Drums*, which most previous writers have characterized as an unfortunate climax to a once-brilliant career, is finally given its just due as an artistic Technicolor Western abundant in suspense, terror and those beloved Lewton touches.

Movie Talk from the Front Lines

Edited by Jerry Roberts
and Steven Gaydos
McFarland, library binding,
305 pps., \$37.50

It's interesting to hear how filmmakers feel about their own brainchildren. Director Richard Rush, for in-

stance, says that his delightful action picture, *Stunt Man*, is "about things which are . . . serious to the human condition, like the panic and paranoia we seem to feel over our inability to understand what's happening around us, and the control over our own lives. This isn't the kind of paranoia they put you in rubber rooms for, but the kind that you feel when you just hear that your boss has had lunch with your assistant. Or [that] your best friend used to date your wife. Or the kind you feel when you're playing poker with strangers who keep winning."

Surprising and amusing comments like this abound among the 17 interviews that make up this collection from the "Critic's Choice" evenings sponsored by the UCLA Film and Television Archive and the Los Angeles Film Critics Association. The interviewees are directors, writers and performers. Those interviewed are Monte Hellman, Ivan Passer, Scott Wilson, Joe Dante, James Coburn, Russ Meyer, Roger Ebert, Oliver Stone, Horton Foote, Richard Brooks, Robert Culp, Dusan Hanak, Charles Burnett, William Friedkin, Robert Altman, Roy Scheider and Slobodan Sijan. Most are salty talkers and the chatter is amusing and informative, although a few dips below the line would have given a more balanced look at our most peculiar business.

Synopses, excerpts and critical comments are supplied for each film covered. The critics ask the right questions and get interesting answers.

Addendum

It has become somewhat of a cliché to point out that filmmaking is a collaborative art. Many critics and writers pay lip service to this undeniable fact but can't bring themselves to put the "auteur theory" where it belongs — in the ashcan. It's too easy to prattle about heroes who create masterpieces while everyone else sits around. We should press our thumbs firmly to our noses for the benefit of the guys who demand the obnoxious billing, "A Film by . . .", or "A [name] film." The director is the boss and every decent member of any production crew does his damndest to help him put his visions into the film. But anyone who wants to be a one-man show should paint a picture, write a book, sculpt a statue, compose a symphony or go off alone with a camera and come back with a movie.

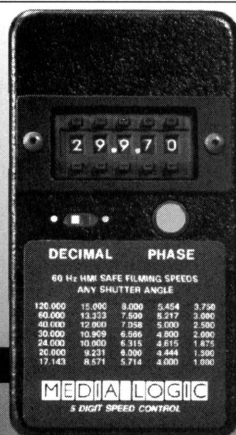


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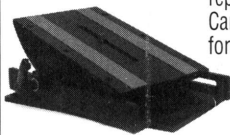
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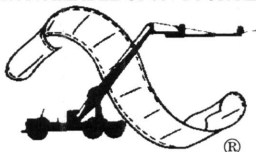
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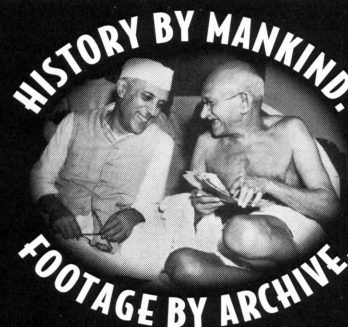
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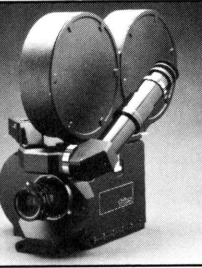


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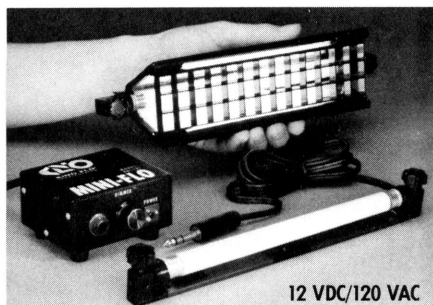
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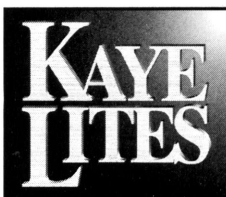
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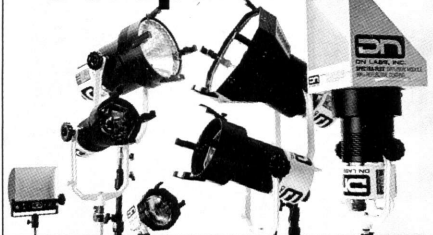
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From the Clubhouse

At the General Body meeting of January 7, held in conjunction with ShowBiz Expo East, Sol Negrin, ASC, president of Local 644 of International Photographers of the Motion Picture Industries, presented the prestigious 1993-1994 Billy Bitzer Awards to Gerald Hirschfeld, ASC, now retired, and posthumously to Frank Landi, a professional camera assistant who started with 644 in 1927. The Billy Bitzer Awards honor the legendary Griffith master cinematographer who became Local 644's first elected president when it was chartered in 1926.

Gerald Hirschfeld's award was accepted by his sons Alec and Marc, also cameramen. Hirschfeld's career started at the Army Signal Corps Center in Astoria. He was vice-president of MPO, one of the well-known commercial production companies during the late 1950s, '60s and '70s. Under his guidance, the careers of Tony Brooks, Sr., Gordon Willis, ASC, Owen Roizman, ASC, and Ricky Bravo began. His credits include *Fail Safe*, *Cotton Comes to Harlem*, *Goodbye Columbus*, *Diary of a Mad Housewife*, *Young Frankenstein*, and many others. He is the 17th recipient of the award.



Recently inducted into the ASC are associate members F. Jack Napor and Leonard Chapman. Jack Napor, president of WRS Motion Picture and Video Laboratory, began working there in 1959 as a customer service representative, but doubled up at other jobs, including lab technician, in the understaffed company. He rose through the company to become business manager, then general manager, then president and CEO in 1968. Napor conceived and commis-

sioned a computerized, fully-automatic, three-strip registration printer with frame-to-frame re-registration, shrinkage compensation, liquid gates, zoom and built-in color analyzer functions. He has also been involved with extensive development work on a variety of other devices and procedures to improve processing and printing quality, and to perform film, video and audio restoration and preservation.

Celebrating the company's tradition of working with independent filmmakers, Napor recently instituted the WRS/Laura Napor National Film Grant in honor of his late mother, who ran the purchasing department for over 20 years. The grant is awarded to independent filmmakers for projects that exemplify the creative process in film.

Leonard Chapman is president of Chapman/Leonard Studio Equipment. After graduating from UCLA, Chapman joined his father in 1956 at the company and went on to engineer and design most of Chapman's camera cranes and dollies that exist today. In 1978 and 1983 he received Academy Awards for the development of the Hustler camera dolly and for the engineering, design, development and manufacture of the PeeWee dolly, respectively. In 1981 he received an Emmy for his contribution to camera cranes for television, and in 1993 the company won an award from the Society of Operating Cameramen for the introduction and development of the Titan family of camera cranes.



The ASC's newest active member, Kenneth Zunder, will be profiled here in our next issue.

Art & Business Make Strange Bedfellows

by Robert Primes, ASC

This is not a pleasant tale for me to tell. Ironically, I feel a little of the victim's guilt about the incident. I feel there must have been something I could have done to prevent it, but to tell the truth, I don't even know how to prevent it from happening again, to me or to any cinematographers who may be reading this, which is the reason I have chosen to publicly discuss the incident.

I was engaged to photograph a network M.O.W. Over the years, I've developed a few techniques to ensure quality tape dailies. I dictate copious notes into a cassette that is sent to the telecine timer daily. I shoot a color chart and gray scale, often through correcting colors, for each lighting change. I telephone the timer each day and watch $\frac{3}{4}$ " or Beta dailies at lunch. In short, my dailies more or less accurately reflect the "look" I am going for. On this particular job, a number of flattering calls from the executive producers and the network convinced me that everyone was happy with the look we were creating.

We were to make a low-contrast 35mm positive print from which the final telecine tape transfer would be made. I arrived at the timing session to watch the first trial print and was surprised to see one of the executive producers (whose background was financial, not technical) sitting there. Not only was he present but he immediately instructed the timer to make this serious drama "Light . . . Light!" I told the producer that the movie wasn't shot to be "Light . . . Light!" He replied that it was *his* movie, not mine, and that he didn't want any arguments.

What followed was a nightmare for me. The producer, who, to the best of my knowledge, had never before been involved with a timing or color-correction session, decided he didn't like shadows. He had a very light print struck and then made an even lighter telecine

transfer. I made an effort to have my name removed from the credits, but was dissuaded by the director (before he had seen the damage). When the show hit the air, it looked to me like everything had been overexposed and lost highlight detail. Frankly, I hated the way it looked. I hoped nobody would see my credit on it.

Clearly, a producer lives with a picture for a much longer time than a cinematographer, and also takes a much larger financial risk. Furthermore, a producer carries an obligation to the investors to safeguard the commercial viability of the film and must therefore have rather broad authority over the project.

On the other hand, an artist, whether actor, cinematographer, writer or director, signs each of his works in the form of screen credits and is therefore given credit or blame for that aspect of the film. I feel something very close to my core has been violated when work that is no longer my work goes out over my credit.

I wish I had an easy formula to reconcile the seemingly conflicting needs of producers' financial responsibility and artists' freedom of expression. You can't really have different standards for "art" and "commercial" films (if you could ever define the two) because "art" films still have to repay investors and "commercial" films are still made by artists who invest their souls and pride in their work.

Most of the time producers respect cinematographers enough to allow them to express themselves freely within any limitations discussed and agreed upon before production begins.

Cinematographers also generally respect producers' trust in them and understand the need to honor their concerns about commerciality. It is only when this mutual trust breaks down that the subject of "artists' rights" becomes paramount.

Many cinematographers have the right to time or color-correct their work written into their contracts. Traditionally, we are not paid for this work because of confusion in union contracts some years ago, confusion between a laboratory *timer* and a cinematographer

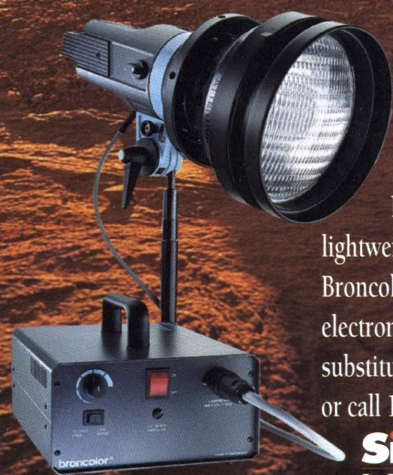
"Cinematographers also generally respect producers' trust in them and understand the need to honor their concerns about commerciality. It is only when this mutual trust breaks down that the subject of 'artists' rights' becomes paramount."

timing his work. We time our work because it is part of the same process we began in the design and execution of the original photography. We do it without pay because we wish to show that we are proud of our work and care more about the effect it has on people than about making money. Perhaps this is a mistake if producers don't respect us unless they are paying substantial fees for our work.

I believe cinematographers must be classified as artists because the work we do touches and affects emotions. Art is generally considered a little magical and mysterious in the sense that it really shouldn't be tampered with except by the artist. We would cringe at the thought of changing a poet's words, a composer's notes or a painter's brushstrokes. Why does anyone think a cinematographer's tonal values are any less sacred?



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* Combined weight of lamphead and ballast unit. Photographer: Michael Fatali

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GamFusion 10-60 • Beam still apparent but edges very soft. Barndoor and shuttering effected with resulting soft light quality. Spot intensity 75% ($-1/2f$ stop). Flood intensity 24% ($-2f$ stops).

GamFusion 10-70 • Beam is hardly perceptible. The light is very diffused and wide. Barndoor & shuttering dramatically effected. Spot intensity 52% ($-1f$ stop). Flood intensity 7% ($-5f$ stops).

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